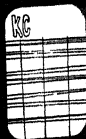


**This book is with
tight
Binding**

kansas city



public library

kansas city, missouri

Books will be issued only
on presentation of library card.
Please report lost cards and
change of residence promptly.
Card holders are responsible for
all books, records, films, pictures
or other library materials
checked out on their cards.



3 1148 00143 5981

MAI FEB 11 1976

MAI JUL 8 1976

JAN 11 1977

MAI 11 17 1977

MAI MAY 4 1978
MAR 5 1980
PLA AUG 11 1981

MAI FEB 1 1983

MAI OCT 19 1985

PUERTO RICO

A GUIDE TO THE ISLAND OF BORIQUEÑ

*Compiled and Written by the
Puerto Rico Reconstruction Administration
in Co-operation with the
Writers' Program
of the Work Projects Administration*

AMERICAN GUIDE SERIES

ILLUSTRATED

*Sponsored by the
Puerto Rico Department of Education*

THE UNIVERSITY SOCIETY, INC. • NEW YORK

MCMXL

FIRST PUBLISHED IN 1940

PUERTO RICO RECONSTRUCTION
ADMINISTRATION

W. D. LEAHY, *Administrator*

MILES H. FAIRBANK, *Assistant Administrator*

FEDERAL WORKS AGENCY

JOHN M. CARMODY, *Administrator*

WORK PROJECTS ADMINISTRATION

HOWARD O. HUNTER, *Acting Commissioner*

FLORENCE KERR, *Assistant Commissioner*

W. D. LEAHY, *Puerto Rico Administrator*



COPYRIGHT 1940 BY
THE PUERTO RICO DEPARTMENT OF EDUCATION

PRINTED IN THE UNITED STATES OF AMERICA

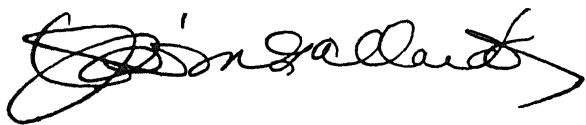
All rights are reserved, including the right to reproduce this book
or parts thereof in any form.

1038268

Mr 1941

Foreword

Even on an Isle of Enchantment where all roads lead to tropical splendor of foliage and flowers, and to ancient cathedrals and fortresses rich in lore and legend, one needs signposts in order not to lose one's way in the maze of alluring paths. This guide contains such signposts, and we hope that it will aid the welcome traveler from overseas to better understand Puerto Rico and to enjoy to the utmost the manifold expressions of its life and culture. These signposts, too, will be useful in revealing to us who live in Puerto Rico, the knowledge and charm to be gained in exploring yet unfamiliar byways.

A stylized, handwritten signature in black ink, appearing to read 'José M. Gallardo'.

JOSÉ M. GALLARDO
Commissioner of Education

Preface

This book, written by Puerto Rican citizens and residents for their fellow-Americans in Puerto Rico and on the mainland, is not designed to add another to the volumes discussing the "problem of Puerto Rico." It is intended merely as a guide for the visitor or stay-at-home voyager, indicating points of interest along highways and in cities and towns, outlining the natural history and resources of the Island, sketching the general background of Puerto Rico's history and tradition, tracing the great stream of Puerto Rican culture to the point where it mingles with that of the mainland, and describing some of the energetic efforts of the Insular and Federal governments, especially during the last few years, to make Puerto Rico a better place for Puerto Ricans to live in. A major purpose of this Guide will be served if it succeeds in introducing to Americans on the mainland their 1,800,000 fellow-citizens of Puerto Rico. Readers wishing to range further afield will appreciate the full bibliography.

The task of preparing the first full-length *Guide To Puerto Rico* has not been easy, and would have been impossible without the co-operation of interested individuals and Federal and Insular officials. Especial thanks are due to Admiral William D. Leahy, Governor of Puerto Rico and Administrator of the Puerto Rico Reconstruction Administration and the Work Projects Administration; to the several chiefs of the different divisions and their assistants

of the P.R.R.A., all of whom contributed to the compilation of material and manifested a helpful interest in the work as it progressed; to former Governor Blanton Winship; to Mrs. Leona B. Graham, Executive Assistant to the Administrator; to Dr. Ernest H. Gruening, former Director of the Division of Territories, Department of the Interior, now Governor of Alaska, and to Mrs. Ruth Hampton, Assistant Director; to Mr. Enrique Ortega, Director of the Puerto Rico Institute of Tourism; to Mr. Adolfo de Hostos, Official Historian; to Dr. José M. Gallardo, Commissioner of Education, whose department sponsored this volume, and to Dr. Juan B. Soto, Chancellor of the University of Puerto Rico. The material was compiled and written in Puerto Rico by employees of the Puerto Rico Reconstruction Administration and prepared for the press with the editorial assistance of the Washington office of the Writers' Program of the Work Projects Administration.

Portions of the typescript were submitted to many consultants. *Natural Setting* was read by Dr. Atherton Lee, Director of the U. S. Agricultural Experiment Station, who also made suggestions for the article on *Agriculture*, and permitted the complete revision of the article on *Flora* by Professor C. L. Horn, Associate Horticulturist at the Station, and the contribution of the section on *Fruit and Root Crops* by Mr. William Pennock, Assistant Horticulturist at the Station. *Agriculture* was also read by Dr. F. A. López Domínguez, former Commissioner of Agriculture and Commerce; *History* was read by Dr. Lidio Cruz Monclova, of the University of Puerto Rico; *Industry, Commerce, and Labor* was read by Mr. Esteban Bird, formerly of the Puerto Rico Self-Help Corporation and now Assistant Treasurer of Puerto Rico; the *Industry and Commerce* section was also read by Mr. Filipo de Hostos, President of the Chamber of Commerce, and the *Labor* section by

Mr. Parudencio Rivera Martínez, Commissioner of Labor; *The People* benefited from the criticism of Professor José C. Rosario of the University; *Education* was read by Miss Carmen Gómez Tejera of the Insular Department of Education; *Religion* by Dr. Charles Rogler of the University; *Music* by Dr. Augusto Rodríguez of the University and by Mr. Waldemar F. Lee, President of the Pro-Arte Musical Society; *The Theater* by Dr. F. Manrique Cabrera and Mr. George R. Warreck, both of the University. The late Professor Antonio S. Pedreira of the University read in detail *Literature* and *Journalism* and the *List of Books about Puerto Rico*; and Dr. Margot Arce, also of the University, made suggestions for the improvement of the *Literature* essay, after it was revised by Mr. René Jiménez Malaret. Mr. Raúl G. Reichard, of the P.R.R.A., revised *Architecture*, which was read by Mr. Rafael Carmoega, formerly Chief Architect of the P.R.R.A.; *General Information* was read and revised by Mr. Frank J. Richardson, Chief of the Information Section, Institute of Tourism; and *Resources and Their Conservation* by Mr. Antonio Luchetti, Chief of the Rural Electrification Division of the P.R.R.A. Professor Gleason W. Kenrick of the University read the *Radio* section; and Dr. George Keelan of the University read *Sports and Recreation*. *Government* was read by Mr. C. H. Terry, General Supervisor of Elections; and Mr. José E. Colom, Commissioner of the Interior, read *Transportation and Communication*. Many authorities on local history and points of interest read the *Cities* and *Tours* sections, among whom were Mr. Roberto H. Todd, former mayor of San Juan, who read the section on that city, Mr. Augusto de Chabert, who read the Tour describing the islands of Vieques and Culebra, and Captain Arturo Muñoz McCormick, who read the Tour describing Mona Island. Among others who read and revised typescript or made helpful suggestions were

Mr. Augusto Malaret, Dr. Jaime Bagué, the Rev. Mariano Vassallo, Chaplain, U. S. 65th Infantry; Mr. Juan B. Castillo, José A. B. Nolla, Director, Insular Experiment Station; Luis Villaronga, Chairman of the Mediation and Conciliation Commission of the Insular Department of Labor; Mr. Emilio Huyke, Mr. Joseph O'Kelly, Dr. María Cadilla de Martínez, and Mr. Ramón Fortuño Sellés. Mr. Juan B. Matanzo edited the final draft. Mr. Steve Hannagan kindly allowed the use of photographs made for the Puerto Rican News Agency, and Mr. W. L. Highton of the Federal Works Agency made photographs especially for this book. During the final revision, frequent reference was made to the admirable *Historia de Puerto Rico* by Dr. Paul Gerard Miller, former Commissioner of Education.

Many other individuals and officials contributed factual information and suggestions for improving this Guide. The selection and arrangement of the facts, however, and any interpretation of them, should not be construed as representing the opinion of any Federal or Insular agency or of any individual.

Thanks are due to the United States Post Office Department for permission to use the 1940 Postal Route Map of Puerto Rico as a base for the folding map in the back of this volume, and to the Forest Service, United States Department of Agriculture, for permission to reproduce the maps of La Mina Recreational Area and Steamship Lanes to Puerto Rico in the body of the book. The tailpieces were drawn by David Weisman of the WPA Art Program.

Final work on the guide was done with the editorial cooperation of Merle Colby of the WPA Writers' Program.

MILES H. FAIRBANK
Ass't. Administrator, P.R.R.A.

Contents

	Page
FOREWORD, by José M. Gallardo, Commissioner of Education .	v
PREFACE, by Miles H. Fairbank, Asst. Administrator P.R.R.A. .	vii
GENERAL INFORMATION	xxi
CALENDAR OF ANNUAL EVENTS	xxxv

Part I. The General Background

THE CONTEMPORARY SCENE	3
NATURAL SETTING	5
RESOURCES AND THEIR CONSERVATION	27
HISTORY	36
GOVERNMENT	68
AGRICULTURE	73
INDUSTRY, COMMERCE, AND LABOR	84
TRANSPORTATION AND COMMUNICATION	97
THE PEOPLE	101
ARCHITECTURE	114
EDUCATION	120
RELIGION	130
CULTURAL LIFE	134
SPORTS AND RECREATION	165

Part II. Principal Cities

	Page
SAN JUAN	171
PONCE	233
MAYAGÜEZ	252

Part III. Tours

TOUR 1	San Juan—Río Piedras—Caguas—La Muda— Cayey—Aibonito—Coamo—Juana Díaz— Ponce [PR 1]	267
TOUR 1A	Río Piedras—Junction of PR 1 with PR 46— Guaynabo—La Muda [PR 46, 25]	285
TOUR 1B	Caguas—Aguas Buenas—Cidra [PR 5, 22] . .	289
TOUR 1C	Cayey—Guayama [PR 4]	292
TOUR 1D	Cataño—Bayamón—Toa Alta—Corozal—Comerio —Barranquitas—Orocovis—El Asomante [PR 1, 25, 24, 9, 15]	297
TOUR 2	Río Piedras—Ponce—Mayagüez—Aguadilla—Arecibo—San Juan [PR 3, 36, 39, 2]	305
	Section a. Río Piedras to Humacao	306
	Section b. Humacao to Ponce	314
	Section c. Ponce to Mayagüez	320
	Section d. Mayagüez to Aguadilla	328
	Section e. Aguadilla to Arecibo	331
	Section f. Arecibo to San Juan.	334
TOUR 2A	Junction PR 3 with PR 23—Trujillo Alto—Gurabo —Juncos—San Lorenzo—Patillas [PR 3, 23, 5, 7, 12]	338
TOUR 2B	Mameyes—Caribbean National Forest (Luquillo Unit)—La Mina—Río Blanco—Pueblito del Río—Mango—Juncos [El Yunque Federal Road, PR 28, 5]	343

	Page
TOUR 3 Manatí—Ciales—Cialitos—Villalba—Juana Díaz [PR 11]	354
TOUR 4 Junction of PR 11 with PR 15—Jayuya—Alto de la Bandera—Adjuntas—Castañer—Maricao— Mayagüez [PR 11, 15, 6, 8, 16, 14, 27] . . .	361
TOUR 4A Junction of PR 8 with PR 16—Lares—San Sebas- tián—Moca—Aguadilla [PR 8, 2]	365
TOUR 5 Ensenada Honda, P. R.—Punta Arena, Vieques— Isabela II, Vieques—San Ildefonso, Culebra [PR 70, 38]	371
TOUR 6 Mayagüez or San Juan—Mona Island	379

Part IV. Appendices

CHRONOLOGY	387
BOOKS ABOUT PUERTO RICO	392
INDEX	403

Illustrations

NATURAL SETTING	Page <i>Between 20 and 21</i>
Traveler's Palm <i>W. L. Highton</i>	Ponce <i>Courtesy P. R. Inst. of Tourism</i>
Sugar Cane Fields, Ciboá Valley <i>Courtesy P. R. News Bureau</i>	Plaza of Yauco <i>Courtesy P. R. Inst. of Tourism</i>
Limestone Hills, Northwest Coast <i>Courtesy P. R. News Bureau</i>	Coast Near San Gerónimo, San Juan <i>Courtesy P. R. News Bureau</i>
"Grotto of Lourdes," Jájome Highway <i>W. L. Highton</i>	Garden at Mayagüez <i>Courtesy P. R. News Bureau</i>
Washerwomen <i>W. L. Highton</i>	Calabashes <i>Courtesy U. S. Dept. of Agri.</i>
Approaching Yauco <i>Courtesy P. R. Inst. of Tourism</i>	Cannon Ball Tree <i>W. L. Highton</i>
Royal Palms, Mayagüez <i>W. L. Highton</i>	Cactus Flowers <i>Courtesy U. S. Dept. of Agri.</i>
El Yunque, Caribbean National Forest <i>Courtesy P. R. Inst. of Tourism</i>	Hat Palm <i>Courtesy U. S. Dept. of Agri.</i>
Palm and Sky <i>Courtesy P. R. Dept. of Agri. and Com.</i>	Breadfruit <i>Courtesy P. R. Reconstruction Adm'n</i>
Road to El Yunque <i>W. L. Highton</i>	Orchids <i>Courtesy P. R. News Bureau</i>
<div style="text-align: left; vertical-align: bottom;">HISTORIC MONUMENTS AND LANDMARKS</div> <div style="text-align: right; vertical-align: bottom;"><i>Between 50 and 51</i></div>	
San Juan Gate <i>W. L. Highton</i>	El Morro, San Juan <i>Courtesy P. R. Inst. of Tourism</i>
Ojo del Agua, Aguadilla <i>Courtesy P. R. Inst. of Tourism</i>	Columbus Square, San Juan <i>W. L. Highton</i>

HISTORIC MONUMENTS AND LANDMARKS—continued

Sentry Box, El Morro <i>Courtesy Div'n of Ter. and Is. Poss'ns</i>	Excavations at Site of Caparra, Home of Ponce <i>Courtesy P. R. News Bu- reau</i>
Casa Blanca <i>Courtesy P. R. News Bu- reau</i>	San Cristóbal, San Juan <i>W. L. Highton</i>
Dining Room, Casa Blanca <i>Courtesy P. R. Dept. of Agri. and Com.</i>	Capitol from San Cristóbal <i>Courtesy P. R. Inst. of Tourism</i>
Tomb of Ponce de León, San Juan Cathedral <i>Courtesy P. R. Inst. of Tourism</i>	Miraculous Cistern, San Cristó- bal <i>Courtesy P. R. News Bu- reau</i>
Statue of Ponce, San Juan <i>W. L. Highton</i>	

AGRICULTURE, INDUSTRY, AND COMMERCE

Between 80 and 81

Pasture near Arecibo <i>Courtesy P. R. Inst. of Tourism</i>	Salt Works at Cabo Rojo <i>W. L. Highton</i>
Truck Garden <i>Courtesy P. R. Reconstruc- tion Adm'n</i>	Fishing Village <i>W. L. Highton</i>
Taking Cane to Central <i>W. L. Highton</i>	Prize Oxen <i>Courtesy P. R. News Bu- reau</i>
Interior, Sugar Central <i>Courtesy P. R. Reconstruc- tion Adm'n</i>	Grinding Grain <i>W. L. Highton</i>
Rum Warehouse <i>Courtesy J. R. Nieves & Cia.</i>	Repairing Rum Barrel <i>W. L. Highton</i>
Tobacco Field <i>Courtesy P. R. Inst. of Tourism</i>	Shaping Logs, Caribbean Na- tional Forest <i>W. L. Highton</i>
Picking Coffee <i>Courtesy P. R. Reconstruc- tion Adm'n</i>	Insular Cement Plant <i>Courtesy P. R. News Bu- reau</i>
Pineapples <i>Courtesy Div'n of Ter. and Is. Poss'ns</i>	Garment Workers <i>Courtesy P. R. Reconstruc- tion Adm'n</i>
Bananas <i>Courtesy Div'n of Ter. and Is. Poss'ns</i>	Baling Sea-Island Cotton <i>Courtesy P. R. Reconstruc- tion Adm'n</i>
Curing Vanilla <i>W. L. Highton</i>	Docks, San Juan <i>Courtesy P. R. News Bu- reau</i>

ARCHITECTURE

- Casa de España, San Juan
W. L. Highton
 Façade, Main Building, University of Puerto Rico
Courtesy P. R. Reconstruction Adm'n
 Stairway, Main Building, University of Puerto Rico
Courtesy P. R. Reconstruction Adm'n
 Capitol, San Juan
Courtesy P. R. Inst. of Tourism
 City Hall, Mayagüez
Courtesy P. R. Inst. of Tourism

RECONSTRUCTION

- Patillas Reservoir
Courtesy P. R. Reconstruction Adm'n
 Hydro-Electric Plant
Courtesy P. R. Reconstruction Adm'n
 Slums, San Juan
W. L. Highton
 Eleanor Roosevelt Housing Development
Courtesy P. R. Reconstruction Adm'n
 Rural Dwelling
W. L. Highton
 New Rural Dwelling
Courtesy P. R. Reconstruction Adm'n
 Falansterio Housing Development, San Juan
Courtesy P. R. News Bureau
 Apartment in the Falansterio
Courtesy P. R. Reconstruction Adm'n
 School of Tropical Medicine, San Juan
Courtesy P. R. Reconstruction Adm'n

Between 142 and 143

- Banco Popular, San Juan
Courtesy P. R. News Bureau
 Modern Small Home
Courtesy P. R. News Bureau
 San Felipe Church, Arecibo
W. L. Highton
 Our Lady of Monserrate, Hormigueros
W. L. Highton
 Cathedral, San Juan
W. L. Highton
 Church, San Juan
W. L. Highton

Between 204 and 205

- A Public Health Unit
Courtesy P. R. Reconstruction Adm'n
 College of Business Administration, Univ. of Puerto Rico
Courtesy P. R. Reconstruction Adm'n
 Central High School, Santurce
Courtesy P. R. Dept. of Agri. and Com.
 Vocational School, Cayey
Courtesy P. R. Reconstruction Adm'n
 Grade School, Eleanor Roosevelt Development
Courtesy P. R. Reconstruction Adm'n
 Vocational School Exhibit, Arroyo
Courtesy P. R. Reconstruction Adm'n
 Vocational School Flower Garden
Courtesy P. R. Reconstruction Adm'n
 Vocational School Farming Class
Courtesy P. R. Reconstruction Adm'n

RECREATION

Arrival at San Juan

W. L. Highton

Condado Hotel

Courtesy P. R. News Bureau

Escambrón Beach Club

Courtesy P. R. Inst. of Tourism

Miami Apartments

W. L. Highton

Treasure Island Camps

Courtesy P. R. Inst. of Tourism

Coamo Springs

Courtesy P. R. Inst. of Tourism

Porpoise Harpooned off Mayagüez

Courtesy U. S. Dept. of Agri.

Catch near Mayagüez

Courtesy U. S. Dept. of Agri.

Between 298 and 299

Off to Fish at Mona Island

Courtesy P. R. News Bureau

Sailing

Courtesy P. R. News Bureau

Golf

W. L. Highton

El Yunque Swimming Pool

Courtesy P. R. Inst. of Tourism

Riding

Courtesy P. R. Inst. of Tourism

Horse Racing

Courtesy P. R. Dept. of Agri. and Com.

Regimental Band

Courtesy Div'n of Ter. and Is. Poss'ns

Native Orchestra

P. R. Reconstruction Adm'n



Maps

	Page
TOUR KEY MAP	front end paper
SAN JUAN	182 and 183
SANTURCE	224 and 225
PONCE	239
MAYAGÜEZ	259
LA MINA RECREATIONAL AREA, CARIBBEAN NATIONAL FOREST	349
STEAMER LANES TO PUERTO RICO	rear end paper
FOLDING MAP OF PUERTO RICO IN COLORS	inside back cover

General Information

Information Service: In the small park on the waterfront facing Pier 1 in San Juan, the Puerto Rico Institute of Tourism maintains a building where descriptive literature is obtainable, and where general and practical information is given regarding trips through the island, steamer sailings and connections, and what to buy. Outside San Juan, information is also available at the Insular Police Stations and Chambers of Commerce throughout the Island. The Puerto Rico Institute of Tourism also maintains an information service in Radio City, New York, N. Y.

Monetary System: U. S. coinage used exclusively.

Language: Spanish is the language of the Island, although English is generally understood.

Proper Names: The Spanish usage in proper names is confusing to North Americans, and even to many Europeans. It is complicated by the fact that its usage in Latin America is flexible, depending to a certain extent on personal predilection. It is further complicated in Puerto Rico by the growing habit of conforming to the North American usage of employing a given name, a middle initial, and a family name. This is opposed to the Spanish order of given name or names, father's name, mother's maiden name, thus:

<i>given name</i>	<i>given name</i>	<i>father's name</i>	<i>(fre- quently omitted)</i>	<i>mother's maiden name</i>
Juan	Ramón	Pérez	(y)	González

This person is addressed as Señor Pérez or as Señor Pérez González, never, as innocent North Americans often do, as Señor González. (In Spain, Vicente Blasco Ibáñez could properly be addressed as Señor Blasco, but never, as was frequently the case in the United States, as Mr. Ibáñez, his mother's maiden name.)

If Juan Pérez marries María Gómez, she becomes Señora Pérez, or, if she wishes to keep her maiden name for professional or other reasons, Señora María Gómez de Pérez. Their son Jacobo would be addressed as Jacobo Pérez Gómez.

If Jacobo Pérez Gómez wishes to conform to North American custom, yet prevent English-speaking strangers from addressing him by his mother's maiden name, he has several choices. He may use his mother's name as his middle name, and call himself Jacobo G. Pérez. Or he may resort to the outlandish device of calling himself Jacobo Pérez G., the custom in some Latin American countries. More probably he will drop his mother's name altogether, calling himself simply Jacobo Pérez, or, if he has a second given name such as Adolfo, then Jacobo A. Pérez.

The visitor to Puerto Rico is on safe ground if he addresses Jacobo Pérez Gómez as Señor Pérez Gómez, remembering to look in telephone directories and library catalogues under Pérez, not Gómez.

Religion: Practically every religion is represented; the Roman Catholic Church is dominant. Churches in all communities.

Clothing: Summer clothing is worn the year round. A light sweater or coat is advisable for winter evenings.

Immigration Requirements: There are no immigration requirements for visitors between the mainland of the United States and Puerto Rican ports; however, visitors wishing to remain on the Island for a prolonged stay must fill out citizenship blanks (furnished by the steamship companies) when purchasing tickets. Most foreign countries maintain consulates or consular representatives at San Juan, Mayagüez, and Ponce.

A Few Native Products: For Men—Canes or swagger-sticks of native woods and shark backbone, rum, cigars, cigarettes, tobacco containers, cigarette boxes, ash trays, book-ends of native woods, fine handkerchiefs, linen suits, palm-straw hats. For Women—dresses, tablecloths, handkerchiefs, lingerie, children's clothes, furniture of native woods, baskets and basketwork of all kinds, beach hats, saddle rugs (*pellizas*).

Duty: There is no customs duty for entry to the United States on articles purchased in Puerto Rico, with the exception of liquors and tobacco, on which there are State and Federal taxes. Some of the better known brands of rum can be purchased with the Federal tax stamp affixed, thus avoiding the payment of the Insular tax.

Highways: Some 2,072 kilometers (approx. 1,287 miles) of excellent roads connect the 76 cities and towns. Moderately priced transportation covers every route with busses and public cars (the latter identifiable by a large letter P on the license plate). Highway markers are in kilometers: 1 km. = approx. 0.62 mi.; 1 mi. = approx. 1.61 km.

Traffic Laws: Maximum speed, urban zones, 24 km (15 mi.) p.h.; rural zones 48 km. (30 mi.) p.h. Many streets in San Juan, Ponce and Mayagüez are designated one-way. Parking in the main streets of San Juan during business hours is prohibited. Sounding of car horns is now strictly regulated by recent legislation. No right turns permitted on red lights.

Non-residents of Puerto Rico may obtain temporary 4-month drivers' permits for \$2.00, payable in internal revenue stamps at the Traffic Bureau, Department of the Interior, Intendencia Building, facing the Plaza Baldorioty, San Juan.

Gasoline stations are plentiful on the Island, especially along the more traveled roads. The price averages 22¢ per gallon. Car services may usually be obtained at these stations, and there are also numerous garages and repair shops.

Railroads: The American Railroad follows a route from San Juan to Arecibo on the north, Mayagüez on the west, to Ponce and Guayama on the south.

Steamship Lines: About 15 companies supply freight and passenger service. Regular sailings from Puerto Rico to Gulf and West Coast ports of the United States, South America, and Europe. Two regular weekly sailings for passengers, mail, and freight from New York via the *New York & Porto Rico Steamship Co.*, serving both Puerto Rico and the Dominican Republic. *Bull Insular Line:* passenger and freight service between Baltimore, Philadelphia, and San Juan. Freight service between Puerto Rico and New York, Jacksonville, and Charleston. Passenger and freight service twice weekly to Virgin Islands from San Juan. *Lykes Line:* passenger and freight service weekly to the Gulf ports of the United States. *Waterman Line:*

weekly passenger and freight service between Puerto Rico, New Orleans, Mobile, and Tampa. *Empresa Naviera de Cuba*: Tri-weekly passenger and freight service between Puerto Rico, Dominican Republic, Venezuela, and Cuban ports. *Automobile Freight Rates*: From either New York or Baltimore are very reasonable. Apply to steamship companies for additional information.

Airplane Service: *Pan-American Airways*, Airport (Isla Grande), Stop 10, Miramar; Ticket Office, Recinto Sur opposite Federal Building, San Juan. Four times a week mail, passenger, and freight service between San Juan, Dominican Republic, Cuba, and United States; three times a week direct service between San Juan and Miami, once-a-week direct service to Jamaica, and twice-a-week service to South American countries. (See Transportation.) *Powelson Service*, office, Valdes 5, Stop 3½, San Juan, land plane between Ponce and San Juan twice daily, between San Juan and St. Thomas, Virgin Islands, daily.

Bureau of Insular Telegraph: The Bureau operates 70 telegraphic stations throughout the Island.

Telephone Service: Porto Rico Telephone Co. serves greater part of the Island. Radio-telephone to United States, Canada, Mexico, Dominican Republic, Cuba, Europe, South America, Africa, Bermuda, Philippine Islands, Hawaii, Dutch East Indies, and ships at sea.

Wireless Service: The Radio Corporation of America supplies wireless service to all parts of the world and ships at sea. All-America Cables Inc., and West Indies Telegraph Co., Ltd., maintain excellent cable service between Puerto Rico and the rest of the world.

Postal Service: United States money and stamps are used. Letter postage 3¢; post cards 1¢; airmail 10¢ per half ounce.

Radio Station: W.K.A.Q., Telephone Building, corner Tanca and Tetuán Streets, San Juan, operated by R.C.A. and affiliated with the Columbia Broadcasting System; W.N.E.L., 59 Brau Street, San Juan, owned and operated by Juan Pizá; W.P.R.P., Ponce, owned and operated by Julio Conesa; W.P.R.A., Mayagüez, owned and operated by the Mayagüez Broadcasting Co.; Naval Radio Station, Stop 8, Puerta de Tierra, San Juan, operated by United States Navy Department for Government traffic.

Newspapers and Magazines: Some of the more widely read newspapers and magazines of the Island are: *El Mundo*, daily, 3 cents, Saturday and Sunday 5 cents, San Juan. *El Imparcial*, as above. *La Correspondencia*, afternoon, except Sunday, 3 cents, San Juan. *El Pais*, Union-Republican, daily noon, 3 cents, San Juan. *La Democracia*, Popular Democratic, evening, 3 cents, San Juan. *The Puerto Rico World Journal*, daily except Sunday, 3 cents, San Juan. *El Dia*, daily, Ponce. *El Sol*, daily, Mayagüez. *Diario Del Oeste*, as above. *El Pueblo*, as above. *Puerto Rico Ilustrado*, weekly illustrated magazine, 12 cents, San Juan. *Alma Latina*, weekly illustrated magazine, 10 cents, San Juan. *El Diluvio*, as above. *Semana Deportiva*, weekly sports review, 5 cents, San Juan. *Deporte Hípico*, as above. *La Milagrosa*, Roman Catholic magazine, San Juan. *Puerto Rico Evangélico*, Protestant magazine, San Juan.

(For publications of Insular agencies, see *Books About Puerto Rico*.)

Accommodations: First-class hotels in *San Juan*: Condado, Palace, San Gerónimo, Bellevue, Escambrón. Apartment hotels: Crescioni, San Cristóbal, and Capitol. In *Ponce*: The Meliá, Bélgica, Inglaterra. In *Mayagüez*: The Moreda, La Bolsa, Cocoanut Hut, and La Palma.

There are also many furnished apartments and boarding houses in San Juan and other parts of the Island (list with prices is available at Tourist Bureau). Popular-priced restaurants in every town.

Living Expenses for Longer Stay: Costs are practically the same as in the eastern part of the United States for comparable living standards, though servants' wages are much lower, and neither fuel for heating nor winter clothing is required. Rents in the residential districts and American food are slightly higher than the average.

The majority of continental Americans living in and around San Juan occupy detached residences and apartments in Santurce suburb, particularly in the Miramar and Condado subdivisions. Bungalows or low Spanish-type houses with two, three, or four bedrooms, rent from about \$40 to \$125 per month, unfurnished, and \$75 to \$150 furnished. Furnished houses are few, except for two or three months in the summer. More pretentious residences, or those with especially attractive locations as, for instance, on the ocean, rent from \$75 to \$150 unfurnished, and up to \$200 furnished.

Most residences in and around San Juan are built of cement, the smaller houses having prepared or galvanized iron roofs and the larger, tile roofs. Nearly all have garages and detached quarters for one or two servants and all have running water, with bathtubs and showers. Numerous up-to-date apartments are moderately priced. Ponce and Mayagüez afford almost the same standards as San Juan. Houses in San Juan and vicinity are wired for electricity—and usually have electric or gas cooking ranges. Communities of more than 1,000 inhabitants are served by power lines. Gas costs a maximum of \$2.55 per thousand cubic feet. Telephone service is \$4.50 a month for a direct wire

and unlimited calls; party wires are less, according to the number of users. Rates in smaller towns are slightly lower.

In accordance with Latin American social customs, the matron of the middle- or upper-class Puerto Rican family does not engage in housework, and continental American families usually conform to this custom also. Servants are plentiful: cooks are paid from \$10 to \$25 per month; housemaids and children's nurses from \$8 to \$15; laundresses from \$9 to \$15; and houseboys from \$5 to \$15, depending on their age and duties. Chauffeurs receive from \$25 to \$60 per month, but usually board and lodge themselves. In the small towns wages are somewhat lower.

Americans planning to make a long stay or intending to establish business offices should secure copies of a mimeographed circular, *Living and Office Operating Costs in Puerto Rico*, distributed free by the Department of Agriculture and Commerce, of the Insular Government.

Organizations:

Civic. Chamber of Commerce, Tetuan 11, San Juan; League for Civic Reforms, Belaval Bldg., San Juan; Rotary Club, Union Club, Stop 10, Santurce; Lions' Club, Escambrón, San Juan. (Similar civic organizations in other major cities.)

Social Welfare. American Red Cross, Ave. Ponce de León, San Juan; Asociación General Antituberculosa, Edificio Ochoa, San Juan; Asociación Protectora de Mendigos, Palma 24, San Juan; Bureau of Social Welfare, Insular Health Department, Stop 19, Ave. Ponce de León, Santurce; Commission to Prevent Tuberculosis in School Children, c/o Caleta San Francisco, Esq., Cristo St., San Juan; Hogar Infantil, Stop 8, Ave. Fernández Juncos, San Juan; Liga Puertorriqueña Contra el Cáncer, Allen 86, San Juan; Puerto Rico Chapter of the American Association of Social Workers, c/o María P. Rahn, Insular Health Depart-

ment, Stop 19, Ave. Ponce de León, Santurce; Sociedad Insular de Trabajadores Sociales, Ave. Ponce de León 215, Santurce; Sociedad para Evitar la Mendicidad, c/o Dr. Pila, Marina and Jobos Sts., Ponce; Sociedad Pro Educación de Adultos, c/o Ateneo Puertorriqueño, San Juan.

Cultural. Ateneo de Puerto Rico, Ave. Ponce de León, San Juan; Library Association of Puerto Rico, Carnegie Library Bldg., Ave. Ponce de León, San Juan; Pro Arte Club, Ponce; Pro Arte Musical, Ateneo de Puerto Rico Bldg. or P. O. Box 214, San Juan.

Fraternal, religious, humanitarian. American Legion, Capitol Bldg.; Boy Scouts of America, Capitol Bldg.; Catholic Daughters of America, Knights of Columbus Bldg., Stop 12, Ave. Ponce de León, Santurce; B. P. O. Elks, Condado; Girl Scouts of America, Allen 15, San Juan; Knights of Columbus, Stop 12, Ave. Ponce de León, Santurce; Masons, Cristo 6, San Juan; Odd Fellows, Bayamón; Order of Eastern Star, Cristo 6, San Juan; Young Men's Christian Association, Ave. Ponce de León, San Juan.

Professional. Dental Association of P. R., San Juan; Lawyers College of P. R., San Juan; Medical Association of P. R., Stop 19, Ave. Fernández Juncos; Santurce; Pan-American Medical Association of P. R., Stop 19, Ave. Fernández Juncos; Pharmaceutical Association of P. R., San Juan; P. R. Society of Engineers, P. O. Box 941, San Juan; American Society of Civil Engineers, Puerto Rico Chapter, P. O. Box 1134, San Juan; Colegio de Ingenieros de Puerto Rico, Army Casino, San Juan; Teachers Association, Templo del Maestro, Stop 8½, San Juan.

Commercial. Asociación de Productores de Caña del Sur de P. R. (Sugar Cane Producers of the South), Ponce; Association of Sugar Producers, Padín Bldg., San Juan; Agricultural Cooperative Society of P. R., El Mundo Bldg., San Juan; Cafeteros de P. R. (Coffee Growers), Ave. de Hostos, Ponce; Corn Growers Association of P. R., Que-

bradillas; Farmers Association of P. R., Allen 4, San Juan; Merchants Federation of P. R., San Juan; Retailers Center of P. R., J. C. Barbosa St., San Juan.

Sports and Social. Adfa Club, Escambrón Beach Club, San Juan; Berwind Golf Club, Sábana Llana, Río Piedras; Casa de España, San Juan; Casino de Puerto Rico, Ave. Ponce de León, San Juan; Country Club, Stop 46, Condado; Club Deportivo and Yacht Club, Ponce; Club Náutico, Stop 9, Ave. Fernández Juncos, San Juan; Union Club, Stop 10, Santurce; Yagüez Rifle, Pistol, and Shotgun Club, Yacht Club, Mayagüez. (Each larger town has one or more social clubs or Casinos.)

Theaters: Almost every town has a theater. San Juan and its suburbs are served by 32 motion picture houses, some of which are air-conditioned, and one legitimate theater, Teatro Tapia (Municipal Theater), offering dramas, musical productions, concerts, and operas, almost entirely in Spanish.

Golf: Berwind Club, Río Piedras; El Morro Golf Club, El Morro Military Reservation, San Juan; Aguirre Links, Ponce; also courses in Guánica, Mayagüez, and United States Army Post at Cayey. Visitors' cards arranged.

Tennis: Y.M.C.A., Yacht Club, and Casa de España, San Juan; Union Club, Miramar; Country Club, Condado; Berwind Club, Mayagüez, and many others throughout the Island.

Baseball: Played during entire year, but the principal season begins around October, and lasts until May. Games at Escambrón Baseball Park, Stop 8, San Juan.

Basketball: Y.M.C.A., Casa de España, University of Puerto Rico. Private courts throughout the Island.

Soccer: El Auxilio Mutuo, near Río Piedras.

Volleyball: Y.M.C.A., Casa de España, private clubs, and residences; played occasionally.

Horse Racing: Twice a week, Wednesdays and Sundays, also holidays, the year round, at Las Casas, Quintana, and Las Monjas Racing Tracks in Hato Rey, between San Juan and Río Piedras. Special busses and public cars run to the tracks; fare 10 cents.

Horseback Riding: Private Clubs and stables.

Cockfighting: Year round on Saturdays, Sundays, and holidays. Every big city and town in the Island has galleras (cockpits) where fights are held. Canta Gallo, near San Juan on Carolina Road; Gallera Borinquen, Guaynabo Road, 20 minutes' ride from San Juan. Busses and public cars, fare 25 cents.

Swimming: Ocean bathing at Escambrón Beach Club, swimming pools at Condado Hotel, Casa de España, Union Club, Country Club, Y.M.C.A., all in or near San Juan; La Mina Recreational Area at Luquillo National Forest and Toro Negro Unit, Caribbean National Forest; ocean bathing also at Isla Verde and Boca de Cangrejos, near San Juan, and at numerous beaches along the coast. Avoid long swims near rocks on unprotected beaches for fear of dangerous fish.

Dancing: Every night at Escambrón Beach Club and Hotel Condado in San Juan; frequent dances at Casa de España, Casino de Puerto Rico, Club Náutico, and Union Club in San Juan, and at other social clubs on the Island.

Mountain Resorts: Luquillo Range (Caribbean National Forest) at El Yunque Peak. Dancing, swimming pool,

bar, and restaurant. Moderately priced cars run from Río Piedras to Mameyes and El Yunque. Cabins are available at a price of \$2 the first night and \$1 for each succeeding day, regardless of number of persons. Toro Negro (Caribbean National Forest). Healthful outdoor activities. Picnic grounds and swimming pool; forest trails to observation tower (see Caribbean National Forest). Guajataca Lake, between Quebradillas and San Sebastián, Road 23, kilometer 14; picnic grounds. Coamo Springs, PR 1 between San Juan and Ponce, near Coamo. Privately owned. Cottage or main building accommodations, with meals, also sulphur bath. Treasure Island, privately owned. Reached by driving along PR 1, San Juan to Las Cruces, then along PR 22. Cottages for two or four, all modern conveniences.

Boating and Yachting: Yacht clubs at San Juan, Ponce, and Mayagüez.

Hunting and Fishing: Good deep-sea fishing all along the coast. Hunting in season for wild pigeons, ducks, etc. The best game areas are the swamps and lagoons in the vicinity of San Juan, Rica and Tortuguero Lagoons near Manatí on the north coast, and Guánica Lagoon and marshlands near Salinas in the south.

Fishing and Hunting Laws: No licenses required for tourists. Obtain cards and information at Insular Department of Agriculture and Commerce, corner Salvador Brau and Cristo Streets, San Juan.

Climate: Puerto Rico is in the path of the northeast trade winds, which dissipate the feeling of lassitude common to tropical climates, making the Island one of the most agreeable and healthful of the Antilles. Over a period of 22 years the average temperatures were 75.4° F., winter,

80.1° F., summer, 78° F. year-round. Temperatures of 65° and 62° F., similar to those of the Bahama Islands, have been recorded in the mountainous regions of the interior. Rainfall is heaviest during summer and fall. The rays of the tropical sun are not dangerous, and sun helmets are unnecessary, but bathers should be careful to avoid sunburn.

Calendar of Annual Events

JANUARY

First	at Hato Rey	Governor's Cup Race.
Sixth	Island-wide	Three Kings, legal holiday. Children presented with gifts. Benevolent, religious and fraternal organizations distribute gifts and toys to poor children.
No fixed date	at San Juan	Boy Scouts' Annual Meeting.
No fixed date	at San Juan	Chamber of Commerce Convention.

FEBRUARY

Second	at Mayagüez Camuy Moca	Nuestra Señora de la Candelaria patronal festivities. Bonfires illuminate the countryside at sunset.
Twenty-second	at Hato Rey	Washington's Birthday, legal holiday. Washington Cup Race.
No fixed date	at San Juan	Legislature meets on 2nd Tuesday after 1st Monday.
No fixed date	Island-wide	Carnival. Two weeks celebration ending on Ash Wednesday. Parades, dances, coronations, and fireworks.

MARCH

Twelfth	at Río Piedras	Anniversary of the founding of the University of Puerto Rico.
Twenty-second	Island-wide	Abolition of Slavery, legal holiday. Special services held by members of the colored race.
Twenty-eighth	at San Juan	Annual U. S. 65th Infantry Rifle matches for the Harney Trophy and Winship Trophy.
No fixed date	at place announced	Convention of Future Farmers of America. Products of boys' gardens exhibited.
No fixed date	at Mayagüez	Presentation of <i>La Rosa Mistica</i> (Sp. The Mystic Rose) Passion Play.
No fixed date	Island-wide	Good Friday, legal holiday—depending upon date of Ash Wednesday. Religious services and Crucifixion processions in all communities.
No fixed date	at Río Piedras	Intercollegiate debates between University of Puerto Rico and a continental university.
No fixed date	at Río Piedras	Intercollegiate track meet, University of Puerto Rico.

APRIL

Sixteenth	Island-wide	José de Diego Birthday, legal holiday. Memorial services at Cathedral of San Juan.
-----------	-------------	--

M A Y

First	at Arecibo	Traditional patron saint festivities in honor of San Felipe.
Second Sunday	at Hato Rey	Mother's Day. Special services in churches and schools. Puerto Rico Futurity Race.
Twentieth	at San Juan Cayey	U. S. 65th Infantry Organization Day ceremonies.
Thirtieth	at Santurce	Memorial Day, legal holiday. All military organizations join in services at Military Ceremony.
Fourth Week	at Mayagüez	Graduation Exercises at College of Agriculture and Mechanic Arts.
No fixed date	at place announced	May Queen festivals at schools and churches.

J U N E

Thirteenth	at Guayama Dorado Isabela Loiza Ceiba	San Antonio de Padua Day. Patron Saint festivities.
Fourteenth	Island-wide	Flag day, displaying of national colors. Special services at Elks Club, El Condado, San Juan.
Third Week	at Santurce	Handicraft Exhibition at Girls' Catholic School and at Insular Home for Girls.
Third Week	at Río Piedras	Commencement Exercises, University of Puerto Rico.
No fixed date	at place announced	Convention of Future Craftsmen of Puerto Rico, under Auspices of Department of Education.
No fixed date	at San Juan	Red Cross Annual Meeting.

JULY

First-Fifteenth	at Camp Buchanan	R.O.T.C. Encampment.
Fourth	at San Juan	Independence Day, legal holiday. Parade includes military units and civic organizations.
Sixteenth	at Aibonito Arroyo Barranquitas Cataño Ciales Cidra Culebra Hatillo Río Grande Vieques	Festivities in honor of our Lady of Mount Carmel, patron saint.
Seventeenth	Island-wide	Luis Muñoz Rivera Day.
Seventeenth	at Barranquitas	Memorial Exercises at the Church and Tomb of Luis Muñoz Rivera.
Seventeenth	at Hato Rey	Muñoz Rivera Memorial Race.
Twenty-fifth	Island-wide	Anniversary of American Invasion. Legal holiday.
Twenty-fifth	Principal cities	James the Apostle Day, patron of Spain, celebrated by Spanish colony.
Twenty-seventh	Island-wide	José C. Barbosa Birthday, legal holiday.
Twenty-seventh	at Hato Rey	Barbosa Memorial Race.
Thirty-first	at San Germán	Celebration of Saint Ignacio de Loyola, patron saint.

AUGUST

Ninth	at Comerío Patillas	Festivities in honor of Blessed Christ of Health.
-------	------------------------	---

SEPTEMBER

First	at San Juan	Bar Association of Puerto Rico Convention.
Eighth	at Aguas Buenas Hormigueros Jayuya Luquillo Salinas	Our Lady of Monserrate Day. Patronal celebration. Pilgrimage of faithful to Hormigueros.
First Week	at Río Piedras	Intramural championship games in tennis, basketball, baseball, and volleyball, University of Puerto Rico.
First Monday after first Tuesday	Island-wide	Labor Day, legal holiday. Labor groups celebrate with meetings and parades.

OCTOBER

First Week	at San Juan	Girl Scouts Week. Public demonstrations of activities of organization.
Twelfth	Island-wide	Columbus Day, known as <i>Día de la Raza</i> (Day of the Race), legal holiday. Special celebrations at the Ateneo and Casa de España in San Juan.
Twelfth	at Ponce	Patron saint celebration in honor of Nuestra Señora de Guadalupe.
Thirteenth	at Río Piedras	Patron Saint festivities of Nuestra Señora del Pilar.
Thirty-first	at San Juan	Halloween. Masquerade dances at Union Club, Casa de España and Officers' Club.

NOVEMBER

Second	Island-wide	All Souls' Day. Religious services, visiting and decorating of tombs.
Eleventh	Island-wide	Armistice Day. Observed with services sponsored by American Legion.
Nineteenth	Island-wide	Anniversary of the landing of Columbus in Puerto Rico, legal holiday.
Last Thursday	Island-wide	Thanksgiving Day.
Last Thursday	at Hato Rey	Holiday races.
Last Friday	Island-wide	Arbor Day, observed by planting of trees by school children.

DECEMBER

Fifteenth	Island-wide	Special Masses at dawn. Singing of <i>aguinaldos</i> (carols).
Twenty-fourth	Island-wide	Christmas Eve. Midnight Mass. Family midnight supper.
Twenty-fifth	Island-wide	Christmas.
Second Week	at San Juan	Convention of Engineers' Association of Puerto Rico.
Fourth Week	at San Juan	Home Economics Association Convention.
Fourth Week	at San Juan	Teachers' Association Convention. Conferences and lectures.
No fixed date	at Río Piedras	Intercollegiate games in baseball, basketball, University of Puerto Rico.
No fixed date	at place announced	Parent-Teachers Association Convention.
No fixed date	at place announced	Convention of Medical Association of Puerto Rico.

SEASONAL

Jan.-Feb.	at local schools	Public elementary school basketball tourneys.
Jan.-March	at Camp Buchanan	U. S. 65th Infantry, rifle firing.
Feb.-June	in sugar-cane growing areas	Sugar-grinding season.
March-April	in tobacco growing areas	Tobacco harvest.
April-June	at San Juan Ponce Mayagüez	Boating Regattas.
May-June	at local High Schools	High School Baseball Championship games.
May-June	Island-wide	Corpus Christi, traditional religious processions.
Nov.-Dec.	in coffee growing areas	Coffee-picking time.
Nov.-June	at San Juan	Conferences, School of Tropical Medicine.
Nov.-April	Island-wide	Cockfighting season; but contests are held the year round.



PART I

The General Background



The Contemporary Scene

PUERTO RICO, scarcely larger than our smallest States (Rhode Island and Delaware), is one of the most thickly populated areas on the face of the earth: 1,800,000 people live in about 3,400 square miles. Had the Island no denser settlement than the United States as a whole, it would have but 139,400 people; while if the United States were as densely populated as Puerto Rico it would have 1,300,000,000 inhabitants. Over-population is one of the most detrimental factors to the welfare of the Island. There have been other factors equally harmful: the ruthless forces of nature (occasional storms, earthquakes, etc.) as well as economic forces obstructing national freedom and native initiative (Spanish colonialism with its oppression and exploitation, absentee landlordism, growth of latifundia, and monopolies), and, on the cultural side, the retarding factors of bilingualism and the dissemination of ideas alien to democracy.

Physically and socially, Puerto Rico is a country of contrasts. There are lowlands and plains, mountains and valleys; there are small areas where it rains almost every day and others of almost desert-like aridity. Puerto Rico is both medieval and modern. There are thousands of families who live with no more conveniences than did the settlers of four and one-half centuries ago. Some of the people still make their dishes from gourds and live in thatched huts such as the Indians built, while others have homes with the latest improvements. Sixteenth-century Spanish fortresses

and twentieth-century structures dominate San Juan's skyline. Nowhere else in the United States and Territories are there such contrasts, for nowhere else has there been a similar clash of cultures. The contrasts are not confined wholly to San Juan, although there they may be the most striking. Giant tractors and ox teams plow adjacent cane fields. At night candlelight and electric bulbs glow in houses separated by no more than a stone's throw. Poverty, widespread and seemingly endless, rubs elbows with great wealth.

Puerto Rico is cosmopolitan and provincial, sophisticated and naive. Although it is possible to fly between San Juan and the United States on commercial schedule within eight hours, Puerto Rico of necessity leads an insular life. Many thousands have never journeyed ten miles from home. Others are familiar with the capitals of Europe and feel equally at home in New York, Paris, or Barcelona.

Natural Setting

PUERTO RICO, the smallest and most easterly of the Greater Antilles, in latitude between $17^{\circ} 52'$ and $18^{\circ} 37'$ North, and longitude between $66^{\circ} 45'$ and $67^{\circ} 22'$ West, is one of the chain of islands extending from the tip of the Florida peninsula to the northeast coast of Venezuela. It is 1,399 miles southeast of New York, 965 miles from Key West, 506 miles from La Guayra, Venezuela, and 480 miles from Cuba. A part of the barrier which separates the Caribbean Sea from the Atlantic Ocean, between Mona Passage on the west and the Virgin Passage on the east, Puerto Rico is strategically situated. It guards the Atlantic approach to the Panama Canal, and serves as its Caribbean outpost.

The Island is rectangular in shape, approximately 100 miles long from east to west and 35 miles wide from north to south. Including the adjacent islands Mona, Vieques, and Culebra, the area is 3,435 square miles. Its low coast line has numerous indentations and headlands. Lighthouse service is maintained on the most conspicuous headlands.

There are at present three main formations in the Island—a central mountainous core of volcanic origin, an elevated area of limestone surrounding the mountainous portion, and the coastal plain.

Viewed from the sea, Puerto Rico presents a rugged and serrated aspect; numerous peaks and summits, with no definite crest line, rise from a general mass, which has

been cut by erosion into lateral ridges separated by deep, precipitous gorges. The drainage divide is approximately parallel to the southern coast and about 10 and 15 miles distant from it. The region thus has a long and relatively gentle inclination toward the north coast, but falls off rather abruptly toward the south.

The two mountain chains which cross the Island from east to west, slightly south of the center, are the Sierra de Luquillo to the east and the Cordillera Central to the west; they rise a little less and a little more, respectively, than 4,000 feet above sea level.

There are few real lakes on the island, but near the seashore are a number of lagoons. They are usually narrow and relatively long, and are surrounded by a dense fringe of mangrove bushes; some are connected permanently with the sea and others are connected only during heavy rains. The water in these lagoons in most cases is strongly brackish. The principal ones are Tortuguero, northeast of the town of Manatí; San José, east of San Juan in the municipality of Río Piedras; Tiburones, between Arecibo and Barceloneta; Guánica, near the town of this name; and Joyuda, north of the town of Cabo Rojo.

Numerous rivers and streams on the Island are of great economic and hygienic value. The most important rivers are the Río Grande de Loíza, Bayamón, Río Grande de Arecibo, and La Plata, all of which drain into the Atlantic Ocean on the north. On some of the rivers waterfalls have been harnessed to generate electric power. As irrigation is a necessity, all these watersheds add to the economic value of Puerto Rico.

CLIMATE

The climate of Puerto Rico is tropical marine, slightly modified by insular influences. In the daily alternation of

land and sea breezes, the former occur at night and lower the temperature after sundown. This air drainage from the high altitudes in the interior of the Island to the coasts results in delightfully invigorating night temperatures, especially during the winter months.

According to weather records, an average of only five days a year are entirely without sunshine. The rainfall is in the form of brief showers, except for the rains that occur in connection with the infrequent tropical cyclones, or when one of the more extensive North Atlantic storms passes eastward along a more southerly route than usual.

The average temperature for the whole Island is 73 degrees Fahrenheit during the coolest month and 79 degrees during the warmest. Only on three occasions during ten consecutive years has a temperature exceeding 100 degrees been recorded.

These land and sea breezes are an important factor in the climate of San Juan, which is 7 degrees warmer in winter than Miami and 4 degrees warmer than Honolulu. The average winter temperature is 28 degrees higher than Nice, 27 degrees higher than Naples, 20 degrees higher than Algiers, and 19 degrees higher than Cairo and Los Angeles.

The mild and equable temperature, the refreshing effects of the trade winds, and the daily sunshine, with the high percentage of ultra-violet rays of low latitudes, are factors that produce the ideal climate of Puerto Rico.

Puerto Rico is occasionally visited by the severe type of cyclonic storms known as West Indian hurricanes. These occur only during the season from July to November, usually in August, September, or October. Upon only five occasions in about 50 years, however, have these hurricanes visited the Island with disastrous effect—in 1891, 1893, and 1899 (each time in August), in September, 1928 and

1932. These storms move so slowly that ample warnings can always be given.

The island of Vieques, nine miles off the east coast at Ceiba, and with an area of 57 square miles, is geologically a prolongation of the mainland of Puerto Rico. Vieques is mostly lowland made up of old land rocks, with small ranges of hills which extend almost its entire length. Puerto Mulas and Puerto Diablo in the north, and Puerto Real, Puerto Mosquito, and Puerto Ferro in the south, are the main points of anchorage.

The island of Culebra, fifteen miles east of Fajardo and eight miles north of Vieques, has an area of eleven square miles. There is an excellent bay used as a base for winter maneuvers of the United States Navy.

Mona, with an area of 19.5 square miles, is an island situated 50 miles southwest of Puerto Rico. This island is a short oval in shape, and its elevated surface is almost horizontal, ending abruptly on all sides in cliffs 150 to 200 feet above the sea. The entire island is honeycombed with caves, containing stalactites and stalagmites of rare beauty. Mona is the habitat of a large number of wild hogs, goats, iguanas, and various species of sea birds.

GEOLOGY

The Island of Puerto Rico is evidently the result of volcanic energy dating from the latter part of the Cretaceous Period. According to geologists, the Antilles, with the central and northern part of South America, were formerly a united body of land—the Antillean Continent. Then the land sank, leaving only the tops of the mountains above water. During a later geologic era the ocean floor was again raised up, the old continent reappearing. The sediment of which it was composed, covered in the meantime by deep sea muds and chalks, was then folded into huge moun-

tain systems, some of the peaks reaching as high as 20,000 feet above sea level. The land again sank to the bottom of the ocean, and broke up into the present island groups; Jamaica was the first to be isolated, then Cuba, and finally Haiti and Puerto Rico.

The vast proportions of this mountain chain may be judged from the adjacent deep-sea soundings, the ocean depths near the Archipelago being the greatest known in the Atlantic. The Brownson Deep, one of the greatest chasms on the globe, is a little less than 100 miles off the north coast of Puerto Rico. From the bottom of this chasm is a vertical distance of at least 27,000 feet to the present mountain heights. It is generally believed that the West Indian Islands are only the protruding tips of the mightiest and most precipitous mountain range in the world, and that if it were pushed above the surface of the water it would reach to a greater height than Mount Everest in the Himalayas.

This extreme ruggedness typifies the Island backbone: a series of mountains, with summits more than 4,000 feet high, extending from the eastern to the western extremity; these, with their foothills, restrict the coastal plains to comparatively narrow strips of land both on the north and the south. To this peculiar formation is due the exceedingly mountainous and irregular appearance of the Island from the sea.

The main divide ascends rapidly from the west coast to a height of some 3,000 feet, and continues toward the center at an average elevation of 2,500 feet, terminating in the Luquillo Range, in which is El Yunque, one of the highest mountains on the Island, with a summit 3,483 feet above sea level. The descents from the main divide to the coast, both on the north and the south, are abrupt, and this, with the heavy rainfall, results in numerous torrential mountain streams that afford an abundance of water power. The

main divide between the watershed of the north and the south coasts is formed by a series of irregular but connected mountain ranges, extending from the Cabeza de San Juan (Cape of San Juan) at the extreme northeastern point to the extreme west. The eastern end of this divide, formed by the Sierra de Luquillo, is connected by a lower divide, formed by the Sierra de Cayey, which terminates at the southeastern extremity of the Island. The Sierra de Cayey closely approaches the southern and western coasts and extends westward at a comparatively uniform elevation of 2,200 feet, with summits reaching a height of over 3,000 feet, to the Aibonito Pass, near the center of the Island.

The main range then rises abruptly west of Aibonito, forming a broader sierra known as the Cordillera Central. This portion of the divide is quite uniform in height and is marked by no abrupt altitudes, the highest summit reaching but little more than 3,000 feet above sea level. It is crossed by passes at altitudes of about 2,500 feet, the principal pass being north of Ponce, leading to Adjuntas at the headwaters of the Portugués and Arecibo rivers. East of Adjuntas and south of Jayuya is the highest peak on the Island, Los Picachos, 4,398 feet.

From here to the west the character of the main range changes abruptly into a number of irregular spurs that branch northwest toward Lares and Las Marías, westward to Hormigueros, and southwest towards San Germán. The principal ranges described above are of the same mixed volcanic and sedimentary origin, consisting chiefly of hornblende, gneiss, and tuff; embedded in them, at altitudes generally below 2,000 feet, are masses of compact blue limestone of the Cretaceous period. Within five or six miles to the north of the main summits, the rivers flow at altitudes of approximately 1,000 feet; they are fed from the ridges above at elevations of 2,000 to 2,500 feet. Within five miles of the coast, however, the river beds are elevated

some 50 to 100 feet above sea level, while the summits of the dividing ridges reach altitudes of 1,000 to 1,500 feet. These high and narrow ridges, often contiguous to the shore line, are separated from one another by deep valleys. As is usually the case where an extensive limestone formation is found, there is much underground drainage, the rivers frequently disappear in chasms to reappear again at some distance, thus forming many subterranean channels. The Island is therefore honeycombed with caves which, having served for ages as the habitations of enormous numbers of bats, contain extensive deposits of guano. The most noted of these caves are near Aguas Buenas.

In the highlands the influences of the water have turned the volcanic rock into tough and sticky red clay, often to the depth of 100 feet. This clay, relatively impervious to water, has retarded erosion and retained a greater degree of fertility than might be expected after years of unchecked erosion. It is exceptionally well suited to the production of coffee and tobacco. The coastal plains, formed by the heavy deposits of alluvium brought from the highlands by the streams, are also very fertile and especially adapted to the raising of sugar cane.

FLORA

Puerto Rico's variations in elevation, rainfall, and soil, together with its location midway in the chain of islands bordering the Caribbean Sea, have contributed to the development of a varied plant life. Many of its 3,355 species, such as trees, shrubs and herbaceous plants, have been introduced and adapted from neighboring islands, but a considerable number of endemic species have developed by evolution since the Pleistocene period, when the Island ceased to be a part of the continent. There are indications that Puerto Rico has been an evolutionary center. The

banks of the Laguna del Tortugero, northeast of Manatí, are of particular interest, for there within a radius of one mile may be found twelve species of plants not known to occur in any other part of the Island or elsewhere.

Puerto Rico has been depleted of its original vegetation until only small areas in the Luquillo Mountain range are looked upon as being partially virgin in character. The Luquillo forest suggests the appearance of the Island at the time of the Spanish conquest—a tropical forest with original growths of all kinds, almost jungle-like in density and variety of trees, vines, and shrub life, enriched by orchids, palms, tree ferns (some 20 feet high), and valuable timber, notably the Spanish cedar, ebony, and West Indian sandalwood. Outstanding among the big trees are the white-bark candle-tree, the wax of which was long used as incense, and the bullet-wood tree, used in the framework of the old churches and other large buildings that have stood for centuries. Lumber from the large, endemic magnolia is one of the most desirable woods of Puerto Rico.

In contrast with the Luquillo area is the horny vegetation in the southwest corner diagonally across the Island. In this dry coastal area where the annual rainfall is about 30 inches, cacti and thorny acacias are the outstanding natural vegetation. Occasionally found in the shrubby vegetation of the dry region are the gregory-wood, West Indian birch, silk-cotton trees, and *lignum-vitae*. The yellowish-brown, hard wood of the *lignum-vitae* was of much value in the early development of machinery in Puerto Rico. It is so heavy that it sinks in water. Because of its straight and fine grain it was long used in the making of rollers and pulleys.

The violet tree, a member of the pea family, is found nowhere else in the world except Puerto Rico. In spring when the tree is barren of leaves the small individual violet-colored flowers completely cover the branches.

The areas having less extremes of rainfall are generally

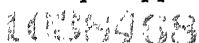
devoted to crop plants: sugarcane, tobacco, citrus fruits, pineapples, and coffee. With the exception of coffee and tobacco, these crops occupy the most level fertile lands. Sugar cane is by far the outstanding agricultural crop of the Island. Tobacco is grown on extremely steep slopes in the center of the Island. The semi-forest cultivations of coffee and bananas occupy extensive areas in the steep, moist parts extending up to the tops of the higher mountains.

Aside from pineapple and grapefruit, there is no intensive cultivation of fruits, although many kinds grow naturally or as plantings about door-yards. In season, mangos and avocados are abundant, and oranges, from the wild trees in the coffee plantations, flood the markets for about three months of the year.

—Puerto Rico has a wealth of ornamental plants both native and introduced. The tree which is most extensively planted along the roadsides is the flamboyant from Madagascar, elsewhere called Royal Poinciana. This gives a great mass of striking red flowers during its long season of bloom in the summer. Palms, bamboos, poinsettias, coleus, and acalypha add much to the beauty of the roadside.

The natural vegetation occurring along streams of the drier regions and over broad expanses elsewhere is generally luxuriant. The foliage of the breadfruit, the native royal palm, and the coconut palm, give a pleasing tropical touch to the vegetation as a whole. The mango and the genip are two common densely-foliaged trees. The African tulip tree, or *Tabebuia*—queen of flowers, Malay apple, bucare, and flamboyant are all flowering trees of rare beauty, the combination of whose successive flowering added to the red, bronze, and chrome leafage of the Indian almond, color the landscape.

The forests of Puerto Rican hat palm, north of Aguadilla, are interspersed with pasture areas and give the rolling country a most picturesque appearance. The unopened



leaves of this palm are used in the manufacture of fine hats and baskets.

Puerto Rico has many ornamental vines and shrubs: bougainvillea, corallita, shower of orchids, jasmine, and Allamanda (climbers of softening foliage and colorful flowers) are profuse. Hibiscus, gardenia, Thunbergia, croton, Ixora, singelica, and poinsettia, are much used for hedges and screens.

The varied plant life of Puerto Rico has been given much attention by botanists. Among published works pertaining to the flora are: *Flora of Puerto Rico*, by a native of the Island, Dr. Agustín Stahl, published posthumously in three volumes in 1936 by the Writers' Project of the Puerto Rico Emergency Relief Administration; *Economic Plants of Puerto Rico*, by Cook and Collins, published in 1903 as Vol. 8, part 2, *Contributions of the United States National Herbarium*; *The Food Plants of Puerto Rico*, by O. W. Barret, published in 1925 as Vol. 9, No. 2, of the *Journal of the Department of Agriculture of Puerto Rico*; and the most inclusive of all, *Botany of Puerto Rico and the Virgin Islands* by Britton and Wilson, published in 1930 as Vols. 5 and 6 of the *Scientific Survey of Puerto Rico and the Virgin Islands* by the New York Academy of Sciences.

SOME FRUITS AND ROOT CROPS OF PUERTO RICO

A visit to the local fruit and vegetable markets is a kaleidoscopic experience in varying smells, sounds, and sights. On recovering from the first impression of confusion and becoming accustomed to voices raised in bargaining and the general atmosphere of willingness to sell, one begins to notice the bizarre shapes and colors of the products on display. Scattered among carrots and string beans, one sees squashes and gourds in hundreds of shapes and

colors, large and small roots and barks of unattractive aspect, monstrosly large and ungainly fruit, pastel shades that look incongruously out of place. In this assorted jumble of vegetable products, esthetic considerations are certainly not a basis for selecting the good from the bad. Fruits fit for kings may look green and bruised, others, delectable and luscious-looking may in reality be nothing but poison-bait for roaches and vermin. To provide a better means of discriminating between these products, and to make better known some of them, which, because of their universal appeal will eventually supplement the diet of people of the temperate zones, we briefly summarize a description of some of the tropical fruits and vegetables of Puerto Rico.

THE MANGO, *Mangifera indica*, is a smooth-skinned fruit about the size of a peach or slightly larger. A few minor difficulties in complying with plant quarantine regulations and lack of experience as to which varieties ship and sell best are the only impediments which at present prevent large shipments of this luscious fruit to northern markets. According to variety this fruit varies greatly in shape and color. There are long, kidney-shaped, round, or conical-shaped sorts; some are quite green even when fully ripe; others are red, orange, or yellow in color. In texture, the flesh is firm like that of a peach. Some of the common sorts, though fine in flavor, are fibrous and stringy and for this reason are best eaten out of the hand. Most of the fiber may then be left adhering to the seed, rather than eaten, as would have to be the case if the mangos were sliced. In taste the mango has been described as "like an apple with a touch of turpentine and yet quite pleasing, nonetheless." This description is well enough for many mangos. Really fine varieties, however, are held by many authorities to be infinitely superior in taste to the nectarine, the peach, and the apricot.

The United States Department of Agriculture has an ex-

cellent collection of fine varieties at the Experiment Station at Mayagüez. Nearly a hundred varieties, many with no trace of fiber or resinous taste, are being propagated and distributed to experimenters throughout the Island.

The mango tree is large and handsome, frequently 80 feet tall and 60 feet across. It has glossy, dark green leaves with a broad and round-topped crown. As its scientific name suggests, the mango is native of India and also of the Malay Archipelago.

Mango fruits are available in the markets and roadsides of Puerto Rico during June, July, and August. During the height of the season, a sackful containing several hundred may be purchased for as little as 15 or 20 cents.

THE CASHEW, OR "PAJUIL," *Anacardium occidentale*, is a relative of the mango, though it differs markedly from it in appearance. It may be of interest to mention that the notorious poison ivy is also a member of the cashew family, *Anacardiaceæ*. The structure of the fruit is most peculiar. The fleshy, edible part with brilliant yellow skin, is in reality the swollen peduncle or stem, the kidney-shaped, large seed which hangs from this, botanically speaking is the true fruit. When roasted, the seed is the familiar cashew nut. The fleshy portion, which may be eaten out of hand, has a most enticing odor. The edible flesh is pale yellow-white in color, juicy, somewhat acid, and pleasantly astringent. The fruit should be eaten when dead-ripe, otherwise it will prove too acid and astringent.

The cashew tree, a native of tropical America, is ungainly in habit and usually about 20 to 30 feet high. The cashew is not cultivated, since it grows vigorously in semi-wild state. No attempts have been made to commercialize it as a fresh fruit. The tree is prolific and bears almost the year around.

THE JEW PLUM, OR "JOBO," *Spondias dulcis*, also a relative of the mango and cashew, is a more or less oval

fruit, 2 to 3 inches long, and orange-yellow in color. It has a thicker and much tougher skin than the cashew. The fruit itself is rather hard and should be eaten only when dead-ripe, at which time it is juiciest and softest. It has an aromatic, pungent, subacid flavor which suggests nutmeg or mace. Except for occasional fruits of exceptional quality, this is not a choice fruit. Poor fruits are hard, with stiff bristle-like fiber. School children, however, are fond of it and in fact refer to "playing hookey" as "eating jobos." The tree is a native of Polynesia, quite tall, about 60 feet by 40 feet, and has compound leaves. The fruit is not cultivated extensively. The bearing season is more or less that of the mango.

THE PAPAYA, OR "LECHOSA," *Carica papaya*, is a melon-like fruit which is closely related to the passion flower and more distantly related to melons and pumpkins. The fruit is usually yellow-orange in color, it is most frequently smooth and melon-shaped, but often round and occasionally slightly 5-angled. The shape of the fruit has in recent years been associated with the degree of sex dominance in the flower. Round papayas are produced by dominantly female flowers, long papayas by intermediate and dominantly male flowers. The dominantly male flowers rarely set fruit, but when they do the fruit has more or less the proportions of a stubby cucumber. The flesh of the fruit looks like that of a good cantaloupe, it is sweet and slightly musky in flavor. Unlike the cantaloupe the flesh is of fine quality right up to the outer layers, and on eating only a little rind need be discarded.

This fruit is comparatively well-known in the north, but as yet truly prime flavor in fruit of consistently good quality is not available to the northern markets. For truly prime flavor, the papaya requires a distinctly tropical climate. Fruit grown in the cooler subtropics is comparatively insipid. However, the papaya, because it is easily bruised in

transit, is difficult to ship over long distances. The papaya "tree" is more properly a giant herbaceous plant which grows rapidly from seed. It bears fruit in about one year's time from sowing and continues bearing for 3 or 4 years thereafter. The papaya, as is now widely known, contains the protein-digesting enzyme, papain. The fruit is considered a wholesome item of fare of particular value for persons with weak stomachs. A papain extract, now available commercially, is made from the latex of the leaves and stems of the plant. The extract is used in the tenderizing of meats. Fruits are available in the markets almost the year around.

THE SOURSOP, OR "GUANÁBANA," *Annona muricata*, is a large, dark-green fruit more or less oblong-conical in form with fleshy spines scattered over its skin, which at a quick glance give it an appearance somewhat similar to that of a pineapple. For the preparation of soft drinks and sherbets the soursop is unrivaled. Those who have tasted "Champola de Guanábana" will agree that it is one of the finest beverages of the world. The fruit frequently weighs as much as 5 pounds. The flesh is snow-white and has a number of black seeds scattered through it. The flesh may be eaten out of hand, but, like strawberries, it contains a protein to which some people are allergic. When consumed as a fresh drink or sherbet this protein is evidently largely left behind and most people seldom, if ever, feel ill effects from it. The soursop is a small slender tree, native of the West Indies and tropical America. It rarely reaches a height of more than 20 feet. The soursop is not cultivated extensively. It grows readily from seed and the supply in Puerto Rico comes mainly from volunteer and dooryard trees. The fruit, which is picked green when on the point of turning and ripens up in a day or two, may be secured in the markets from June to September.

THE BULLOCK'S HEART, OR "CORAZÓN," *Annona retic-*

ulata, a relative of the soursop, is usually heart-shaped and weighs from a few ounces to 2 pounds. It is reddish-yellow to reddish-brown in color, and its skin, though marked in a scale-like pattern, is comparatively smooth. The flesh looks and tastes like a cream custard. In fact, the fruit is known as the custard apple in some sections, although locally that name is applied to a near relative, the "Anón." The fruit is sweet, too sweet for most palates, and, particularly near the skin, the flesh has a disagreeable granular texture. The tree is 20 to 25 feet high and is also a native of tropical America.

THE STAR-APPLE, OR "CAIMITO," *Chrysophyllum cainito*, is a round fruit of about the size of a peach. It is smooth-skinned, glossy, and, depending on variety, may be green or purplish when ripe. When halved transversely it is found to be differentiated into two kinds of flesh arranged in a star pattern, hence the name. (The "cainito" should not be confused with the "carambola," a tropical fruit of quince-like flavor, which also is sometimes called the star-apple.)

Directly under the skin is a layer of firm flesh and enclosed by this are eight translucent segments in which the seeds are embedded. Both kinds of flesh are deliciously sweet. The outer flesh near the skin, particularly in fruits which are not dead-ripe, has a gummy latex element which sticks to and puckers the lips. When the fruit is served with cream it makes a delicious dessert and the stickiness is avoided. This is a delicious tropical fruit, but because of its softness, shipments to northern markets have not as yet been tried. The tree is highly ornamental, growing to be about 50 feet high and 30 to 40 feet across. The leaves are dark green and glossy on the upper surface and golden brown with a sheen like that of satin on the underside.

THE AVOCADO, OR "AGUACATE," *Persea americana*, is from the consumer's point of view more a vegetable than

a fruit, although in Brazil and California it is used for flavoring ice cream. In Puerto Rico, when in season, it comes to be one of the really wholesome items of diet of the poor. It is often used in place of butter or cheese. An avocado and a loaf of bread frequently constitute a full meal. Avocados are now beginning to find their place in northern markets where they retail for about 10 to 15 cents each. Unfortunately, the West Indian type, which is larger and has a nutty, fine flavor, does not ship well. The New York market is mostly supplied with the Mexican or Guatemalan types which are smaller and less easily bruised. The avocado is a dark-green, smooth-skinned, pear-shaped fruit. The West Indian type is usually about the size of a large Bartlett pear but occasionally is considerably larger, having been known to weigh as much as 3 pounds. The meat is yellow-green in color and surrounds a large pit or seed; the meat is high in fat content ranging from 6 to 12 per cent. The digestibility of this fat is on a par with that of butter fat. In the continental United States, the avocado is frequently used in salads. In the tropics it is used as a relish or is diced in soups or more frequently is eaten in large pieces out of hand. Although the different varieties produce fruit at different times in the year, in Puerto Rico the high peak of the season occurs in late summer and early fall.

The tree is a native of tropical America and is usually slender, growing to a height of about 40 feet.

THE BREADFRUIT, OR "PANA," *Artocarpus communis*, is another fruit which from the consumer's point of view may be more properly called a vegetable. It is a large, round fruit weighing from one to several pounds; when immature, it is green in color with a pebbly-grained skin. On ripening it turns brownish and then yellow. The fruits are generally harvested at an intermediate stage of maturity when the color is green and just beginning to turn.



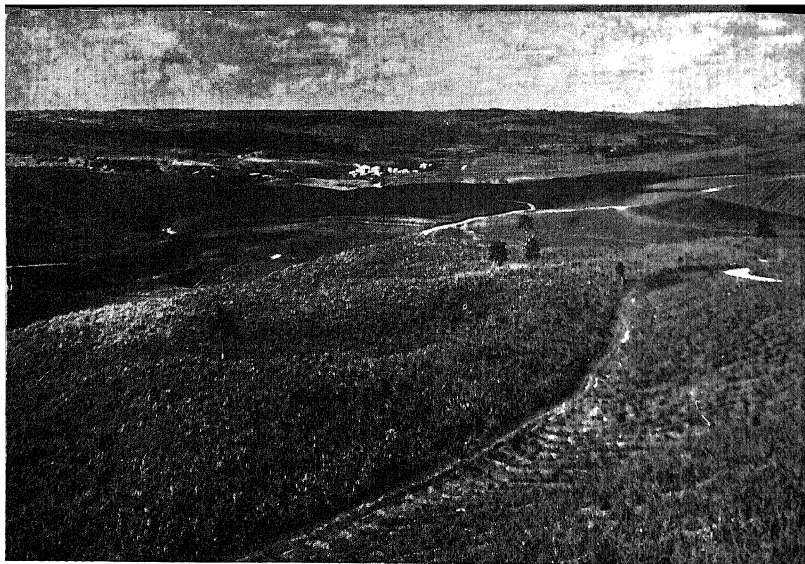
Natural Setting





W. L. Highton

TRAVELER'S PALM



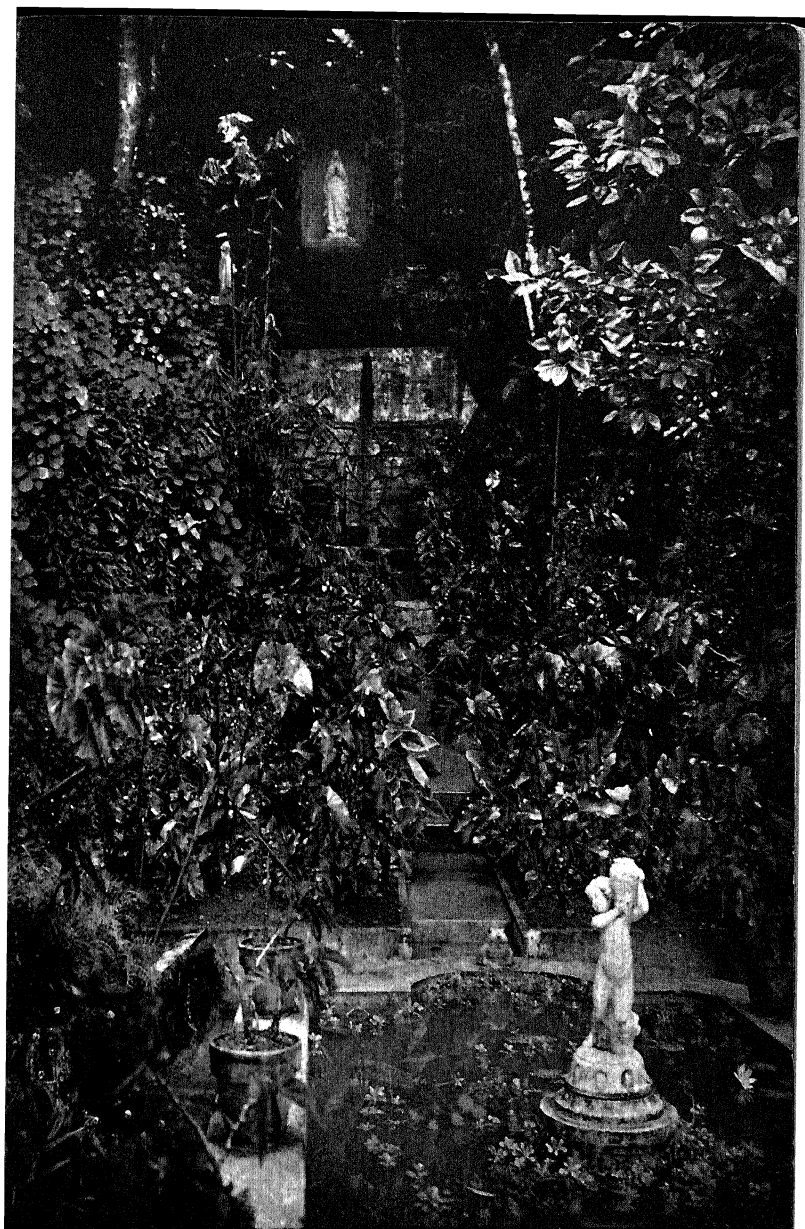
SUGAR CANE FIELDS, CIBOA VALLEY

P. R. News Bureau

P. R. News Bureau

LIMESTONE HILLS, NORTHWEST COAST





W. L. Highton

GROTTO OF LOURDES, JÁJOME HIGHWAY

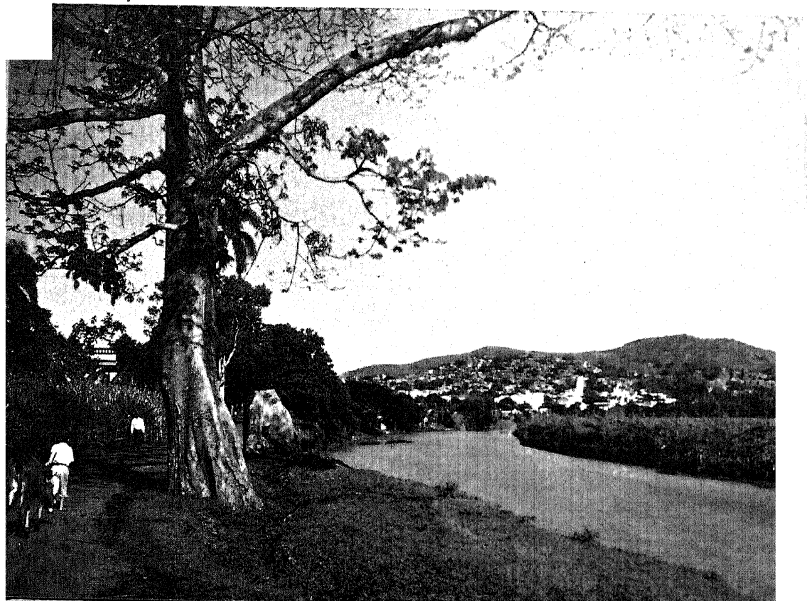


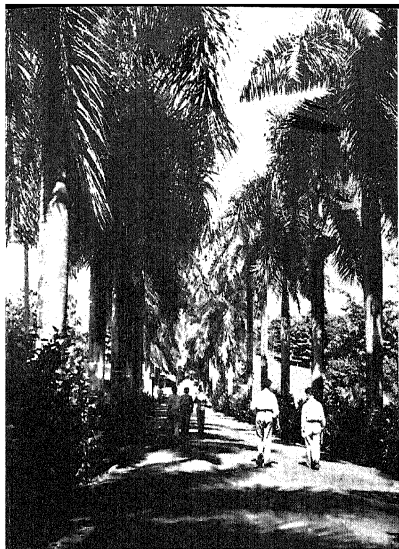
VASHERWOMEN

W. L. Highton

R. Inst. of Tourism

APPROACHING YAUCO





W. L. Highton
ROYAL PALMS, MAYAGÜEZ



P. R. Inst. of Tourism
EL YUNQUE, CARIBBEAN
NATIONAL FOREST

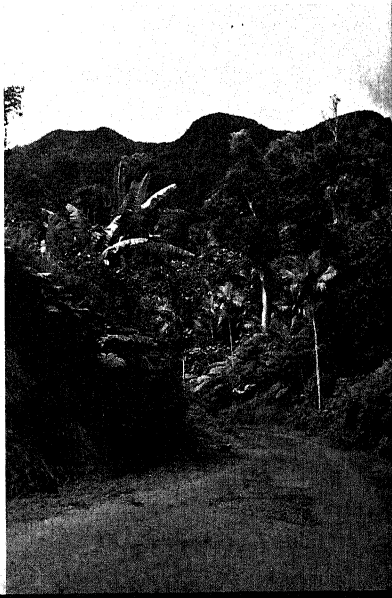
PALM AND SKY

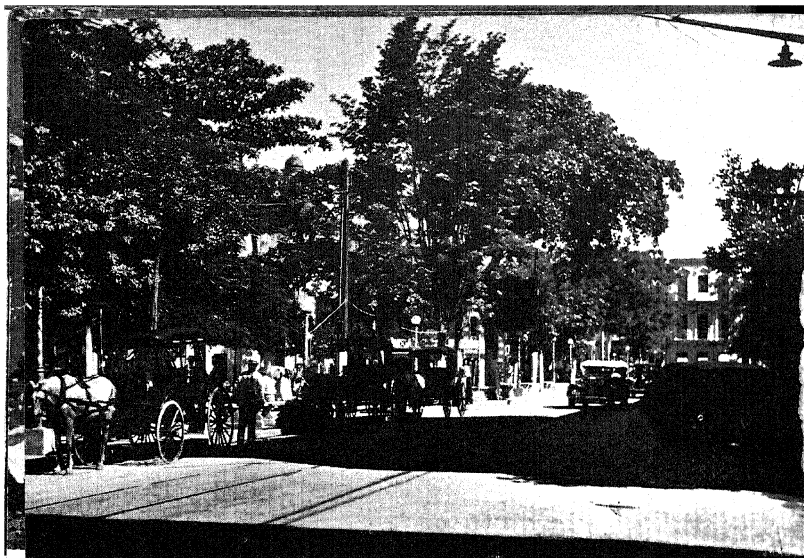
P. R. Dept. of Agri. and Com.



ROAD TO EL YUNQUE

W. L. Highton



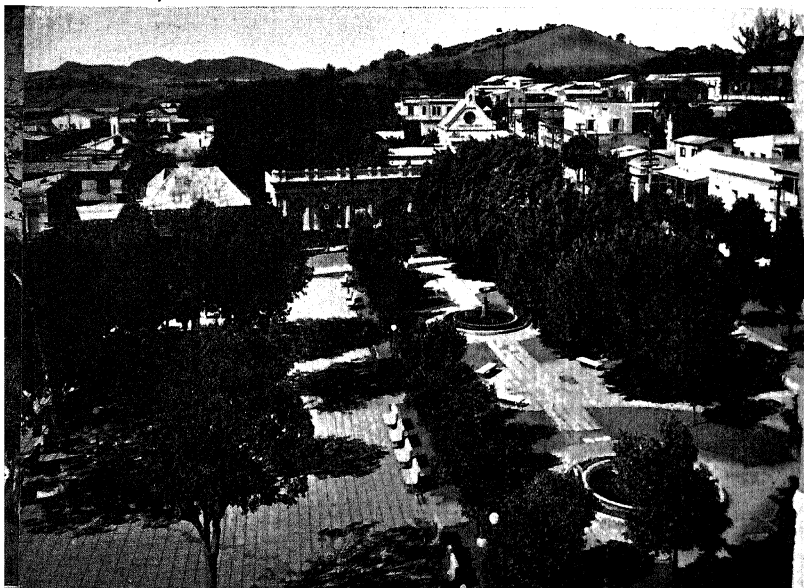


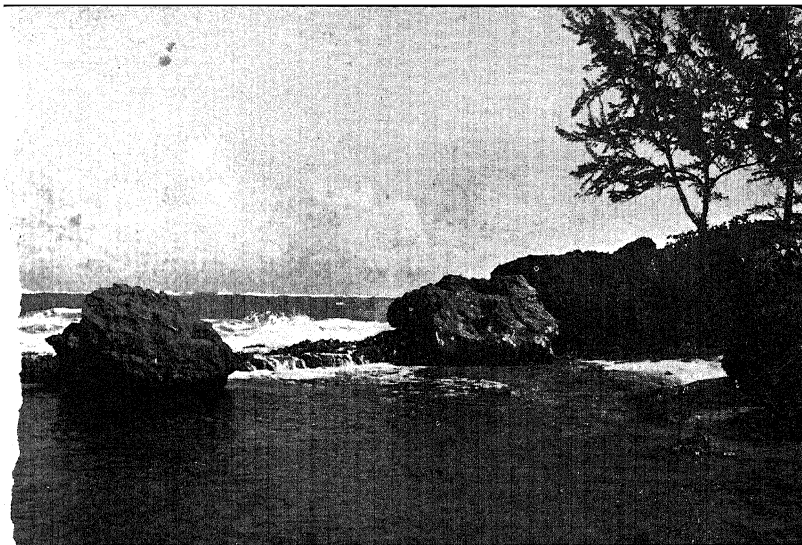
PONCE

P. R. Inst. of Tourism

P. R. Inst. of Tourism

PLAZA OF YAUCO



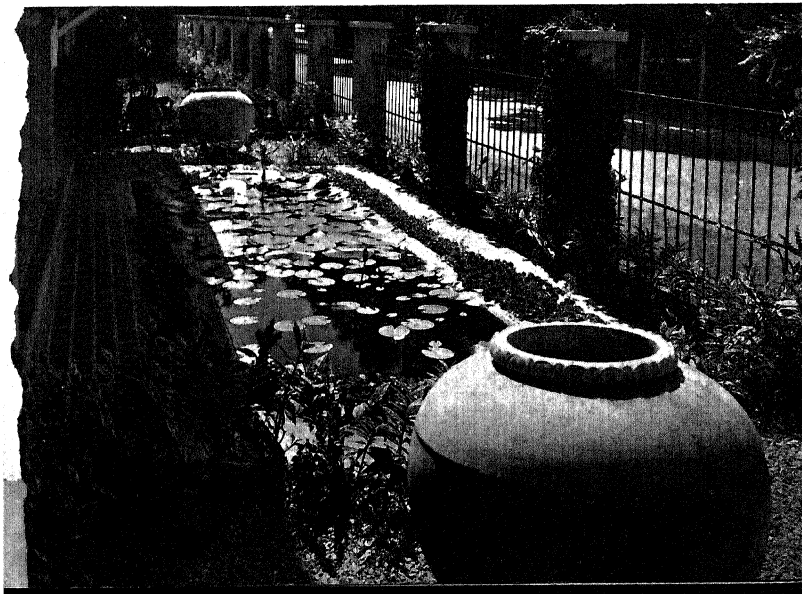


P. R. News Bureau

COAST NEAR SAN GERONIMO, SAN JUAN

GARDEN AT MAYAGÜEZ

P. R. News Bureau





CALABASHES
U. S. Dept. of Agri.

CANNON BALL TREE
W. L. Highton (Right)



CACTUS FLOWERS



U. S. Dept. of Agri.

HAT PALM

BREADFRUIT

P. R. Reconstruction Adm'n.



ORCHIDS

P. R. News Bureau



The fruit is seedless. The white or slightly yellow pulp is generally eaten boiled and forms a mealy, starchy food with bland taste. The breadfruit tree is a native of Polynesia. Its introduction to the West Indies was the main purpose of that famous trip of H.M.S. *Bounty* during which the historical mutiny occurred.

There is a seed-bearing type of breadfruit, with the same botanical name, which may more properly be termed breadnut. The tree is almost indistinguishable from that of the seedless breadfruit, and the external appearances of the two fruits are similar. The breadnut, however, contains a large number of seeds that remind one of the American chestnut, but are slightly larger and not quite so sweet. These seeds are cooked like chestnuts and, in Puerto Rico, are frequently sold by vendors much in the fashion as are chestnuts in some cities on the continent.

THE SQUASH, OR "CALABAZA," *Cucurbita* sp., is a large pumpkin or squash with many shapes and colors. Most plantings are made up of a highly heterogeneous population. The seeds from one plant produce fruits which vary tremendously in size, shape, and color. Many of these fruits have a high, spicy quality which makes them desirable for pie making. Locally it is used in soups or stews and as a boiled staple. The vines are vigorous, requiring a minimum of care and giving a high yield per acre.

There are many root crops which furnish cheap and wholesome food to the Island. Chief among these are yams, "batatas," manihot, "yautías," "malanga," and the "lerén."

THE TRUE YAMS OR "ÑAMES" are *Dioscorea* species and should not be confused with sweet potatoes, *Ipomoea batatas*. Yams are large, thick, root-like vegetables usually weighing about 2 to 6 pounds, although they sometimes grow much larger. Some tubers weighing more than 100 pounds each have been harvested at the Experi-

able texture one sometimes gets in "new" potatoes. This crop is highly seasonal, being available only around Lent. The "lerén" remains attached to fibrous roots and the vendors tie them up together in bunches. They look like large marbles tied together with string.

FAUNA

The scarcity of Puerto Rican fauna is partly accounted for by the Island's comparative isolation, tropical storms, and the devastation of forest caused by the density of population.

Except for the domesticated types, there are no large mammals. Bats, dolphins, and sea cows are the only indigenous species.

It is estimated that 1,500 species of insects inhabit the Island, 992 having been listed by R. H. Zwaluwenberg in 1914-1915. Claudio Capó classifies them as follows:

- 29 belong to the family of the grasshopper, cricket, and katydid.
- 50 are of the true bug family.
- 73 of the group, including the leafhopper, are scale insects and white flies.
- 216 are species of the butterflies and moths.
- 5 are species of fleas, among them the rat-flea carrying the bubonic plague.
- 181 belong to the fly family, of which some are beneficial and many harmful.
- 270 are of the beetle variety.
- 143 pertain to the family of the bee and wasp.

Spiders and spider-like animals are classified under two general divisions: the poisonous, represented by only two types, the scorpion and the local tarántula, called guabá; and the harmless spiders, called alguacil (small, short-legged), peluda (hairy), negra (black), and the common house spiders, of which some half dozen types occur. The obnoxious tick or garrapata, of the aracnoidea group, is also found in Puerto Rico.

There are many different types of the hard and soft shell crabs inhabiting both salt and fresh water, including *can-grejo*, *juey*, *jaiba* and *buruquena*. Other local designations used for the several families of this important class of crustaceans are modified by descriptive words such as river, beach, mangrove, square, pointed, red and spotted, denoting the characteristics of the animal.

Marine and fresh-water types of lobster and shrimp are found.

The Pagurina tribe, locally named *cobos*, is represented by several species.

The Myriapodes are of two varieties: the poisonous centipede and the harmless *gongolí* or *gongolén*.

Of the worm, the only species having a commercial value is the blood-sucking leech which inhabits some creeks, particularly in the eastern coast of the Island. Earthworms are common throughout the Islands.

Of the edible species, mollusks, octopi, squid, oysters, clams, and snails are abundant. All along the coasts myriads of the smaller species of this group are found. Of the radiate group, the most common ones are sea urchins and starfish, which occur in several varieties.

Of the many species of Polyp found, the Madrépora or Coral Plant deserves special mention.

Literature on the birds of Puerto Rico is very limited, though some data left by early explorers and priests have been preserved. In 1810 Pierre Ledru, a Frenchman, published the first detailed list of birds in the Island, numbering 83 species. Later on, 25 species were added by Dr. Hartland, who recognized the similarity between the Puerto Rican and Dominican avifauna. In 1874, Dr. Juan Gundlach, a Cuban scientist, published an extended list of bird life in the Island, including 153 species, with notes on their habitats and occurrence.

The bird life is classified as follows: birds of prey, 2

species, 6 subspecies; common birds, 13 species, 57 subspecies; climbers, 3 species, 9 subspecies; gallinaceous, 2 species, 45 subspecies; web-footed, 2 species, 25 subspecies.

Many Puerto Rican birds are the farmers' best friends, by virtue of their appetite for injurious insects. Some of these are the ani and Puerto Rican grackle, flocks of birds found around sugar plantations; the king-bird, petchary, and owls which inhabit coffee regions; the Puerto Rican sharp-shinned hawk and West Indian red-tailed hawk, found in mountain regions, which feed on rats, lizards, and other salamanders detrimental to agriculture.

Puerto Rico has a number of lagoons and extensive marshlands where a variety of water game, such as Wilson snipe, famous for its delicious meat, is found in abundance. This game migrates to Puerto Rico from North America. The *zarapico blanquinegro* (yellow legs), *pato de la Florida* (blue-winged teal), *pescuezilargo* (Bahama duck), *morisco* (lesser scaup duck), and the *pato cuchareta* (shoveler) visit the Island in great flocks during the winter. An acclimated species, the *chorizo* (ruddy duck) and the *yaguaza* or *chiriria* (black-bellied tree duck), is common in Island ponds and lagoons.

Puerto Rico's waters teem with fish. About 300 valuable species are abundant in the fresh water and along the coast. A partial list of Puerto Rican fish includes mullet, red snapper, sardine, weakfish, grouper, sawfish, hogfish, eel, striped anchovy, ray, leather jacket, squirrelfish, fresh water mullet, frigate mackerel, barracuda,, parrotfish, lionfish, big-eye fish, bananafish, ladyfish, puffer, Spanish mackerel, sea-bat.

The gigantic tortoise of Puerto Rico is closely allied to the famous large tortoise of the Galápagos Islands. Large specimens of shark flash along the coast, among them the nurse, tiger, ground, black-tip, and the feared hammer-head.

Resources and their Conservation

ONE of the fundamental problems confronting Puerto Rico is land use and conservation. This problem affects the entire economic and social structure of the Island, where the cultivated ground averages half an acre per capita and the available tillable land is scarcely seven-tenths of an acre per capita.

The total land area of Puerto Rico is 2,137,280 acres, of which 1,220,000 are classified as improved soil. Of this number 604,760 acres are under cultivation; 376,979 are in forest and brush lands; and the remainder is chiefly in natural pasture, with small areas in swamp and waste land. The cultivated area comprises 319,000 acres devoted to sugar cane, 200,000 to coffee, 30,000 to tobacco, and the rest to fruits and minor crops. An additional 400,000 acres could be reclaimed, leaving large regions of precipitous mountain sides and eroded soil for reforestation. Soils may be reclaimed and improved by proper tilling; variations in rainfall may be overcome by irrigation; and soil erosion on steep slopes arrested by terracing, contour plowing, and by planting protective covering.

According to the census taken by the Puerto Rico Reconstruction Administration in 1935, there were 52,790 farms, of which 38 per cent were less than 20 cuerdas (1 cuerda is approximately 1 acre) each, and 0.2 per cent were of 500 cuerdas or over. This 0.2 per cent of the total, however, accounted for 25.2 per cent of the total improved land of all the farms.

Much of the Island's territory is unsuitable for cultivation; therefore reforestation has become an important program of land utilization. Most of the lumber used on the Island is imported, since the forest regions now contain little timber of any value.

A century ago Puerto Rico was described as "an island completely covered with forests." Since that time its mountains have been almost denuded of trees, except for scattered remnants of the original vegetation in the higher elevations and the mangrove swamps in the coastal regions. The Luquillo National Forest, comprising about 33,000 acres, constitutes the only solid remaining expanse of virgin growth. In the Cordillera Central, over the higher peaks, some valuable forest tracts persist, but as these are privately owned, they are rapidly disappearing. The Insular and Federal governments are undertaking a comprehensive and vast program of reforestation, notably at Maricao and Luquillo.

ANIMALS

There is practically no animal conservation in Puerto Rico. This can be partially explained by the extreme density in population, the hurricanes which have periodically ravaged the Island, and its comparative isolation from other land centers. Adjacent Mona Island is the habitat of a large number of wild hogs and various species of sea birds.

After its introduction in 1510, and continuing as late as the latter part of the nineteenth century, the livestock industry, highly important, was centered chiefly in the southern lowlands. Cattle and horses from Puerto Rico were in great demand in the other Spanish colonies; today this once thriving industry is limited to the raising of work oxen for the sugar plantations and a few horses for the stables of well-to-do families. These horses are noted for their re-

markable training. Some are known for their *paso fino*—a pace which enables the rider to carry a full glass of water in his hand without spilling a drop. Others are gaited for the *andadura*, a running-walk, or for smooth trotting.

A recent survey of the fish fauna of Puerto Rico conducted by the U. S. Bureau of Fisheries revealed that its rivers possess no native species of fishes and that only those marine types which have been able to become adapted to a fresh water environment are now found in the streams. The Forest Service, in cooperation with the Federal Bureau of Fisheries and insular authorities, has established fish hatcheries at the Luquillo and Maricao units of the Caribbean National Forest and many of the reservoirs and streams feeding them are now being stocked. The Luquillo pool is for display purposes only, but the Maricao hatcheries have an output of almost 500,000 fish a year.

WATER

The early Spanish explorers spoke of Puerto Rico as "the Land of Rivers." The name is appropriate, for the Island's average rainfall is 68 inches annually, in certain regions reaching as much as 250 inches. The mountains receive the heaviest rainfall, which runs off in numerous torrents to form the larger rivers of the coastal plains. Most of the water falls on the northern slopes, for the central range of mountains, crossing the Island from east to west, precipitates the moisture carried by the northeast trade winds. Consequently, the south coast, and to some extent the northwestern elevated coastal area extending from Arecibo to Isabela, are characterized as arid regions of Puerto Rico. The 51 rivers and 1,200 streams provide surface water for industrial, municipal, and domestic use, and also offer excellent opportunities for irrigation and hydroelectric power development.

In general there is sufficient rainfall to provide the Island's streams with water for a continuous flow the year round. Seventy of the 77 municipalities have public water supplies. Ordinarily, the supply is derived from surface water, though several towns use well water. In cities and larger towns different types of purification are in use, especially mechanical sand filters and chlorine.

Mayagüez and Naguabo became in 1867 the first towns to own and operate a public water supply. In Arecibo the hydroelectric plant furnishing electricity to the municipality also supplies power for the local water system. In rural districts the water supply is inadequate; rain water is stored in cisterns in some communities, while in others water is drawn from the local wells.

The tropical climate permits an all year growing season, but the variation in rainfall from one year to the next—typical of tropical countries—causes short but intensive droughts that partly nullify climatic benefits.

Settlers of Puerto Rico came from Spain, an arid country where irrigation was introduced by the Moors centuries ago, and brought their irrigation methods to the Island. Concessions often are in perpetuity, for irrigation by individual landowners was first granted in 1841. Small irrigation systems were built to carry water to arid lands, particularly the southern plains. Many of the small brick or masonry canals, some of them resembling miniature Roman aqueducts, are still in use.

With the American occupation and the resultant free trade between the United States and Puerto Rico, American capital caused an enormous expansion of the sugar cane industry. Storing the flood waters of the rivers to irrigate the ever-increasing cane plantations became a necessity. The Insular Government, through the issuance of \$5,000,000 in bonds, completed in 1914 the construction of an extensive public irrigation system covering a 40-mile area of

rich lands along the south side of the Island between Patillas on the east and Juana Díaz on the west. A system of canals with a combined length of 100 miles distributes the stored waters to 33,000 acres of sugar cane.

The profitable results of these ventures brought about a general demand for irrigation in the northwestern dry lands of the Island, and the Insular Government then undertook the construction of the Isabela Irrigation system, completed in 1928. In this region are the municipalities of Isabela, Aguadilla, and Moca, which are devoted to individual diversified agriculture; tobacco, sea-island cotton, corn, and a variety of tropical food plants (*see Tour 2*).

Water Power. Although Puerto Rico has no mineral fuel resources it has considerable potential water power. It is estimated that the developed hydroelectric power of 35,100 horsepower is about one-third of the total possible development. Various power sites throughout the Island could be developed, among them the waterfalls on El Salto de Comerío, Río Toro Negro, Río Blanco and other rivers, which have been harnessed for the generation of electric power. Control of water utilization is of primary concern to both the Insular and Federal governments.

The Spanish pioneers, seeing the possibilities in waterpower, built small mills for the processing of their agricultural products. In the old haciendas where sugar cane was ground by waterpower, the remains of many sluices or huge water wheels may be seen. In the coffee haciendas of the interior, waterpower is still used to shell and prepare the product for marketing.

From a modest beginning in 1882 at Adjuntas, where hydroelectric development for public lighting in the Island was first installed, electric power and light has become a major industry. Today there are two privately owned power systems in the Island, one of them serving about 35

towns, including San Juan. Several municipalities own their power plants.

Hydroelectric power, being generated as part of the water development of the Insular irrigation systems, reduces the cost of water to the planters. The Carite power plant and the plant at Isabela, both government-owned, furnish power to neighboring communities.

The Puerto Rico Reconstruction Administration is carrying out a rural electrification program to aid in the conservation and development of the Island's natural resources, through the construction of hydroelectric projects. It is mainly concerned with the inland regions where electric power, for operating coffee mills and for supplying the necessary energy for irrigation during the periods of serious droughts, is wholly lacking.

The PRRA has added the Toro Negro Hydroelectric Plant No. 2 and an extension to the original Toro Negro plant No. 1, located north of the town of Villalba, and has also contributed a plant to the Carite hydroelectric system.

Besides the above mentioned projects, the Administration has also under construction the Dos Bocas project, a hydroelectric development of one of the largest drainage areas on the Island, on the Río Grande de Arecibo, 20 kilometers south of Arecibo, while PWA is bringing to completion the Garzas hydroelectric project, on both sides of the mountain divide in the vicinity of Adjuntas and Peñuelas.

When the present program has been completed, an important step toward the prevention of soil erosion will have been achieved: 300,000 acre-feet of water per year, which otherwise would have been wasted, and might possibly have done irreparable damage, will have been harnessed and made available for irrigation; and energy in the amount of

90,000,000 kilowatt hours per year will have been placed at the disposal of the people.

MINERALS

The mineral resources of Puerto Rico have been little developed but the Insular Bureau of Mines is carrying on extensive research to determine their value for industrial purposes. The Federal Emergency Relief Administration made similar investigations and the Puerto Rico Reconstruction Administration is now cooperating on a program of mineral development.

Gold. For many years following the conquest of the Island, gold mining was the principal industry, and according to official statistics the Spanish Crown received 2,700 pounds of Puerto Rican gold, between 1509 and 1536. It has been found at the watershed of the rivers of the north-eastern coast, principally in Corozal, Manatí, Luquillo and Mameyes. Grains or nuggets with a high gold content have also been found near Mayagüez, San Germán, Yauco, and Coamo.

Copper. The first exploitation of copper began in 1869, but owing to mining difficulties and the cost of transportation, it ceased shortly thereafter. Ores found on the Island include: iron-bearing (mostly copper), native copper, green and blue carbonates, yellow copper sulphate, often accompanied by iron pyrites and iron oxides. The richest deposits are along the Cordillera Central from Río Blanco to Maricao.

Silver. Silver deposits were reported during the first quarter of the sixteenth century. On July 19, 1538, Colonial officials wrote to the King of Spain that veins of lead containing some silver had been found, and on March 29th of the following year they again wrote: "With respect to the silver here discovered, we arranged that the mineral

be fused here, but there is no person who knows how to do it. In some places veins of that metal have been found but nothing has been done pending the arrival of someone who knows how to fuse and work it." Friar Iñigo Abbad in his *History of Puerto Rico*, published in 1788, mentioned a silver mine in the Serranía de Añasco, and in 1879 the chief engineer of the Bureau of Mines reported that samples of silver were found in Barrio Llanos, municipality of Isabela. Other official documents also report the existence of silver in the northern part of the Island.

Lead and Silver-bearing Minerals. Lead deposits have been officially reported in several districts. Up to several years ago a silver-bearing lead mine was operating at Barrio del Carmen, Guayama, and there is still sufficient ore there to warrant further development. Good samples of galena have been uncovered at Arroyo, Mayagüez, and Naranjito.

Iron. In many places, especially in the eastern section, magnetic iron of excellent quality is found. The most important deposits are at Las Piedras, Humacao, Juncos, Gurabo, Naguabo, San Lorenzo, Patillas, and Arroyo, where the richness of the ore sometimes exceeds 60 per cent. There are also deposits in Utuado, Jayuya, Mayagüez, and other regions.

Manganese. Deposits of manganese are widely distributed through the Island, notably in the regions of Juana Díaz, Aguada, Adjuntas, and Lares. The Juana Díaz and Corozal deposits were exploited in the past, but due to world-wide production and economic difficulties, no mining is now attempted.

Coal. Lignite or lignitic material occurs in the northern central or western regions from Corozal to Moca, principally in Utuado, San Sebastián, and Lares.

Marble. Marble of excellent quality is found in Trujillo Alto, Guaynabo, Caguas, and Ponce. Expert opinion

indicates that the marble found in Naguabo is comparable to the world famous Carrara.

Granite. The presence of granite is reported in the eastern part of the Island, especially the Luquillo range. High grade building stone is quarried at Juncos, San Lorenzo, Humacao, and Gurabo.

Limestone. An excellent quality of limestone is obtainable in the northern section of the Island.

Gypsum. Deposits of gypsum occur in Ponce and Manatí, but nothing has been done to exploit them.

Clay. Clay is found in abundance all over the Island. It is used in the manufacture of bricks, tiles, and rough ceramic articles.

Kaolin. Deposits of kaolin found in Yauco and Arroyo have been partially developed, and used in making porcelain.

Phosphate Rocks. Phosphate rocks are found in Cabo Rojo, Manatí, Isabela, and Ponce.

Salt. Salt is manufactured exclusively in the southern coastal regions; the solar evaporation process is used.

History

PUERTO RICO, a tiny part of the new world, was an unsuspected treasure laid at the feet of their Spanish Majesties, Ferdinand and Isabella, by Christopher Columbus. Columbus returned from his first voyage with living proofs of what lay beyond the mysterious ocean, astonishing the people with the sight of red-skinned captive Indians, samples of strange plants and animals, and offering them the prospect of finding fabulous quantities of gold and precious gems in the new land.

News of the discovery created such enthusiasm that when the Admiral announced that a second expedition was being organized, he was besieged by *hidalgos* anxious to share with him new glories and riches. In addition, there were monks and priests, whose religious zeal was stimulated by the prospect of converting to Christianity natives of unknown lands; struggling merchants, who hoped to mend their fortunes with the gold to be had, as they thought, for the picking up; and finally, the protégés of royalty and of influential persons at court, who sought lucrative places in the new territories. As a result, the Admiral counted among the fifteen hundred companions of his second expedition representatives of every class in Spain.

At daybreak on September 25, 1493, the second expedition, an armada of seventeen ships, sailed from Cádiz. Columbus, son of a Genoese woolcarder, stood on the deck of his flagship, equal in rank to the noblest *hidalgo* in Spain, Admiral of the Indian Seas, Viceroy of all the islands and

continents to be discovered, and title holder of one-tenth of all the expected gold and treasures.

Among members of the expedition were Bernal Díaz de Pisa, accountant of the fleet; thirteen Benedictine friars, at their head Boil, who, with Mosén Pedro de Margarit, the strategist, respectively represented religious and military authority; Roldán, the first alcalde of Hispaniola; Juan de Esquivéal, the future conqueror of Jamaica; Father Marchena, the Admiral's first protector, friend, and counselor; the two knight commanders of military orders, Gallego and Arroyo; the queen's three servants, Navarro, Peñasoto, and Girau; the pilot, Antonio Torres, who was to return to Spain with the Admiral's ship and first dispatches; Juan de la Cosa, cartographer, who traced the first map of the Antilles; the father and uncle of Bartolomé de las Casas, the apostle of the Indies; Diego de Peñalosa, the first notary public; Fermín Jedo, the metallurgist; Villacorta, the mechanical engineer; Luis de Ariega, afterward famous as the defender of the fort at Magdalena; Diego Velázquez, the future conqueror of Cuba; and Diego Columbus, the Admiral's young son. Among the men-at-arms, one was destined to play the principal role in the conquest of Puerto Rico. His name was Juan Ponce, a native of Santervas de Campos in the kingdom of León, a poor *hidalgo* and a veteran of the Moor wars.

The first island discovered on this voyage was near the middle of a chain which stretches northwest from Trinidad, near to Puerto Rico. Columbus shaped his course according to the order in which the islands appeared, one after the other, merely touching at some for the purpose of taking formal possession in the name of Spain and obtaining what information he could. In some places, upon entering the native huts, the conquerors found much cotton, spun or ready for spinning, household articles, and human

bones. They had found the islands inhabited by the redoubtable Caribs, who ate human flesh.

On the afternoon of November 17, as the fleet sailed between the islands today known as St. Thomas and Culebra, Columbus sighted a larger island. The fleet sailed along its northern coast for a whole day. That night, two Indian women and a boy, captives of the Caribs released by Columbus at one of the islands, swam ashore, having recognized their home—Boriquén. On the 19th the fleet anchored in a bay on the western coast. There Columbus landed and took possession in the name of their Catholic Majesties, calling the island *San Juan Bautista* (Saint John the Baptist) in honor of Don Juan, then Crown Prince of the Kingdom of Castile. That island today is Puerto Rico.

Near the landing-place was found a village deserted by its panic-stricken inhabitants, consisting of a dozen huts surrounding a larger one of superior construction. From the village a road or walk, hedged in by trees and plants, led to the sea. After remaining two days in port (November 20th and 21st), without a single native having been seen, the discoverer's fleet lifted anchor on the morning of the 22nd and proceeded to Hispaniola (Santo Domingo). It is not recorded that Columbus ever saw Puerto Rico again, but during the next fourteen years numerous vessels and fleets stopped there to take on fresh water.

By royal decree, Vicente Yañez Pinzón, who had visited the Island briefly in 1499, was commissioned to conquer and colonize it. Pinzón, however, in 1506 (the year Columbus died in Spain), transferred his rights and titles in the appointment to Martín García de Zalazar, in company with whom he landed a few goats and hogs. But the Island remained unexplored and uninhabited by white men until 1508, when Nicolás de Ovando, Governor of Hispaniola, gave permission to Juan Ponce de León to undertake an expedition there in search of gold.

Ponce equipped an expedition of fifty men, including Juan González, who served as interpreter. Pausing at Mona to learn the route from the Boriquén Indians there, Ponce landed on the southern coast on August 12, 1508, at the bay of Guánica.

The strangers were hospitably received by the Boriquén Indians. The mother of Agüeybana, the local cacique (chief) was a woman of acute judgment. No doubt fugitives from Hispaniola had told her of the Spaniards there, and of their irresistible might in battle; at any event she had prudently counseled her son to receive them with kindness and hospitality. Accordingly, Ponce and his men were welcomed and feasted. A ceremony common among many aboriginal tribes, of exchanging names with a visitor as a mark of brotherly affection, cemented the new bonds of friendship, so that Agüeybana became, for the time being, Ponce, and Ponce became Agüeybana. The sagacious mother of the chief received the name of Doña Inez, after Ponce's wife. }

Ponce, after exploring the coast, San Juan Bay, and the Toa river, built a large hut and wharf at Caparra, and returned to Santo Domingo early in 1509, taking with him samples of gold, leaving behind some of his companions.

Ovando gave Ponce permission to remove his family and possessions to the Island, and made a new compact with him to further the colonization. Late in 1509 Ferdinand of Spain named Ponce Governor of the new colony.

When Ovando was replaced as Governor of the Indies by Diego Columbus, son of Christopher, the king ordered Don Diego to respect the arrangement Ovando had made with Ponce. On board the provision fleet sent by the king to the new lands was a young nobleman, Cristóbal de Sotomayor, whom Ponce made chief constable, and who founded in 1510 the second Spanish settlement on the Island, at the port of Aguada, calling it Sotomayor. The Chief Con-

stable soon had occasion to exercise his judiciary powers, for Diego Columbus, in defiance of the orders of the king, had named Juan Cerón as Governor of the Island, and appointed other officials. These Sotomayor promptly arrested, and Ponce sent them back to Spain.

✠ To work the gold mines, the Spaniards in Puerto Rico employed the system of *repartimientos* in effect in Santo Domingo. This consisted of distributing among officials and colonists fixed numbers of Indians. The first *repartimiento* in Puerto Rico took place in 1509. Although the Spaniards, by the terms of the agreement, were obliged to pay the Indians for their labor and to teach them the Christian religion, they soon reduced the Indians to a condition of abject slavery.

Soon after the death of the friendly cacique Agüeybana, the Indians, desperate at their cruel treatment and their chain-gang existence in the mines, determined to wipe out the Spaniards. The interpreter Juan González, painted like an Indian, managed to attend a secret meeting of caciques in February, 1511, at which a plan was decided upon. In spite of the warning, Guaybaná (or Agüeybana), son of the former cacique, killed Sotomayor and his men, and gravely wounded González. Meanwhile, Guarionex, cacique of Utuado, reduced the town of Sotomayor to ashes and killed eighty of its inhabitants. (Juan Ponce thereupon organized a campaign, and after hard fighting killed Guaybaná and two other caciques and put down the rebellion.)

Meanwhile Juan Cerón, who had arrived in Spain under arrest, was adjudged by the king's council to be the Governor of the Island, and accordingly Ferdinand ordered Ponce to yield the governor's post to Cerón. As a recompense Ponce was given an authorization to explore new lands. In 1512, accordingly, he set out in search of the land of Biminí, where, according to the legend, were a miraculous fountain of youth and much gold. He found

neither, but did discover Florida, which he thought an island. Returning from his voyage of discovery, after difficulties with the authorities in Puerto Rico he set out for Spain in June, 1514, taking with him 10,000 pesos in gold, smelted at a mint he had constructed in Caparra a few years before. Ferdinand heard him graciously, ratified his titles and added new ones, so that the once poor man-at-arms now rejoiced in the appellation of Governor of Florida and Bimini, Captain by Sea and Land of the Island of San Juan Bautista, Lifelong Alderman of the Municipal Council of the City of Puerto Rico, and Lifelong Captain of the Regiment of Boriquén. Laden with honors, Ponce returned to the Island in 1515.

Ponce's first act was to divide the Island into two administrative districts, bounded by the Camuy and Jacaguas rivers. The smaller, western district he called the District of San Germán; the larger, eastern one the District of Puerto Rico. Again, however, quarrels arose between Ponce and crown officials.

The transfer of the capital from Caparra to the present site also caused dissension. Ponce was opposed to the change, and when the city was transferred in 1519 to the little island that today is the old quarter of the capital, Ponce remained in his fortified house at Caparra. The city and the Island exchanged names, and the City of San Juan Bautista de Puerto Rico became the official capital in 1521.

In 1521 Ponce organized his last expedition, setting out again for Florida. Wounded by the fierce Indians there, he took refuge on the island of Cuba, where he died. His remains were brought to San Juan in 1559, and transferred in 1908 to the Cathedral of San Juan, where they are today. From 1515 to 1525

(The Island settlements suffered from plagues, hurricanes, raids of Caribs, and attacks by the French and British.

The colony was constantly on the point of being abandoned.) When the news of fabulous riches discovered in Peru reached the Island, Governor Lando wrote to the king in 1534: ". . . two months ago there came a ship here from Peru to buy horses. The captain related such wonderful things that the people here [San Juan] and in San Germán became excited, and even the oldest settlers wanted to leave. If I had not instantly ordered him away the Island would have been deserted. I have imposed the death penalty on whosoever shall attempt to leave the Island."

The first hurricane following the colonization had occurred in 1515, a second in 1526. In 1530 three hurricanes visited the Island within a period of less than two months; others wrought havoc in 1537, 1568, and 1575. By 1570 the gold mines were utterly exhausted, having produced altogether only about \$4,000,000 in gold.

Incursions of Caribs from the neighboring islands made the existence of the colony precarious. Wherever a new settlement was founded, Caribs descended, killing the Spaniards, destroying the plantations, and carrying off natives.) They destroyed a settlement along the banks of the Dagua and Macao rivers that had been founded by Diego Columbus in 1514. A new settlement which had sprung up along the border of the river Humacao met the same fate in 1520. In 1521 the Caribs attacked the south coast, and by 1529 they dared even attack the capital itself. Between 1564 and 1570 they were particularly active. Loíza, which had been resettled, was destroyed for a second time in 1582 and a year later Aguada was attacked. At the beginning of the seventeenth century, however, the Carib strongholds were occupied and the Caribs themselves subdued by the French and British sea-rovers, not out of any desire to assist Puerto Rico, but because Spain's ultra-

marine possessions offered tempting prizes to these privateers.

The quarrels, jealousies, and mutual accusations between the colonists and the Government officials, that kept the Island in a continual ferment, were the natural consequence of the prerogatives exercised by Diego Columbus, which permitted him to fill any government position in the Island. Don Diego was deprived of his right to appoint officials in 1537, and henceforth the *alcaldes* (mayors) and chief *alguaciles* (high constables), to be elected from among the colonists by a body of eight *regidores* (aldermen), were to exercise the governmental functions for one year at a time, and could not be re-elected until two years after the first nomination. The system of annually electing officials among the residents lasted until 1544.

A law passed in 1541 increased confusion and discord. This law made the pastures of the Island, as well as the woods and waters, public domain. The result was aggression on the part of the landless and resistance on the part of the land owners, with consequent scenes of violence and civil strife.

From 1528 to 1554 the French unsuccessfully attempted to capture the Island. In 1528 they sacked and burned San Germán. All the other first settlements—Guánica, Sotomayor, Dagua and Loíza—had disappeared. Only the capital remained. In 1529 there were 120 houses; the Cathedral was completed; and the Dominican Convent was under construction.

The Island remained almost defenseless against the nations with which Spain was constantly at war. After frequent and urgent petitions by the inhabitants, the construction of the first fort, the Fortaleza, was begun about 1533 and concluded in 1540. It is now used as the residence of the Governor. Gonzalo Fernández de Oviedo denounced it as a piece of useless work which "if it had been con-

structed by blind men could not have been located in a worse place," and in harmony with his advice fortifications were begun in 1540 on the rocky promontory called El Morro, and slowly improved through the years.

{The history of early settlements illustrates the constant danger which the colonists faced. The original settlement of San Germán, constructed on the beach of Añasco, was burned by the French in 1528. The town was rebuilt and fortified, and in 1543 again destroyed by the French. New Salamanca, today San Germán, was established on its present site in 1570-73, burned by French corsairs in 1576, and again rebuilt. Guadianilla, settled on the bay of Guayanilla in 1556, was attacked by Caribs in 1565, burned to ashes by the French in 1573.}

In 1582 there were in San Juan, the most heavily fortified town, only eighteen cannon. Repeated attacks on the Island, particularly during the late 1500's, convinced Spain that if Puerto Rico were to be held its defenses must be strengthened. Elaborate extensions to El Morro were made from 1599 to 1609. The picturesque city wall, a great part of which is still preserved, was begun in 1630, and its construction continued for a decade. The defensive program was carried on for a period of almost two centuries, to terminate with the construction of Fort San Cristóbal in 1771.

Sir Francis Drake, hero of the battle of the Spanish Armada, and Sir John Hawkins, the first English slave trader, were operating in the Spanish Main. In 1595 they learned that a galleon with vast treasure, en route from South America to Spain, had put into San Juan harbor. The Spaniards managed to remove from the galleon two million pesos in silver and gold and secrete it in La Fortaleza. In the battle Hawkins was mortally wounded by fort guns, and Drake, who saw his forces nearly annihilated by heavy fire from the forts, sailed in defeat toward South

America, to die before he reached Porto Bello. The English, who had destroyed the Spanish Armada a few years before, failed here to get their hands on more gold than the whole Armada had contained.

(Again in 1598 the English returned to Puerto Rico, this time with a fleet of twenty ships under George Clifford, Earl of Cumberland. Landing at Santurce, the British tried to force San Antonio Bridge, and later landed troops at the Escambrón and marched into San Juan. The capital surrendered for the first time in its history, but disease broke out among the invaders and they abandoned the Island after holding it over five months.

At the end of the sixteenth century, only two towns of consequence existed—San Juan and San Germán. In the capital were only 170 residents and heads of families and 14 priests. Some twenty families lived at Coamo, ten families at Arecibo. A few colonists had settled on the banks of the Bayamón, Toa, Jacaguas and Loíza rivers. In all there were not over 2,500 whites, and the eastern portion of the Island had no white inhabitants at all.

There remained, of the thousands of Boriquén Indians at the time of Columbus' discovery, probably less than 1,500 on the Island at the close of the century. When Charles V of Spain decreed that the Indians should be freed from slavery, the Bishop was able to discover, in the year 1544 when he attempted to put the decree into effect, only 70 Indians. Others, wandering in the mountains, and still others, mixed with Negro slaves in the corrals or hidden by their owners, were ultimately set free.

Father Bartolomé de las Casas, the "Apostle of the Indies," had in the beginning of the century suggested that in place of Indian slaves Negroes be imported. The introduction of slavery into the Antilles should not be attributed to the good father, however, for in 1502 Governor Ovando had brought with him to Santo Domingo

slaves for his domestic use. Other slaves had been brought over from Seville to work the mines of Santo Domingo, and in 1510 Vicente Yáñez Pinzon brought from Seville to Santo Domingo 110 Negro slaves, purchased in Lisbon. The general introduction of slaves into the Antilles was authorized in 1513, and by 1531 over 1,500 Negro slaves had been imported to Puerto Rico. Three years later, Governor Lando wrote, "The Island is so depopulated that Spaniards are scarcely seen—only Negroes." To avoid smuggling of Negroes those imported legally were branded with a hot iron—the *carimbo*. Any slave not so branded could be confiscated and sold at public auction. By the end of the century, Negro hands had replaced Indian ones in field and sugar mills.

The principal products were cassava, corn, sugar-cane, ginger, and fruits. There were considerable cattle, wild and domesticated, and hides were an important article of export. Coconut palms had been introduced from the Cape Verde Islands, and fowl from Guinea. The principal industry was the production of sugar. Christopher Columbus had brought sugar-cane from Santo Domingo to Puerto Rico on his second voyage, and by the end of the century there were in all eleven sugar-mills on the Island. Trade was insignificant; the only means of travel were the rivers and paths formed by the Indians; and the people lived in ignorance and misery.



COLONIAL PERIOD: 1600-1798

The powerful Dutch Indies Company, organized for war as well as trade, early in the 17th century presented Puerto Rico with a threat from a new quarter. Juan de Haro had been Governor of the Island only twenty-six days when the Dutch squadron arrived on September 24, 1625, under command of Bowdoin Hendrick. The Dutch

entered the harbor of San Juan and besieged the city. Hendrick sent a message to the Spanish governor to surrender El Morro.

When the governor refused, hostilities were resumed on the land side of El Morro and continued until the 24th of October, when Hendrick sent another message announcing his intention of burning the city unless the Spaniards surrendered. To this letter the governor replied that there were timber and stones in the Island with which to construct another city, and he wished the whole army of Holland might be there to witness Spanish bravery. Thereupon the invaders burned the city, destroying over 100 houses, the bishop's palace, the library, and the city archives. The Spaniards then attacked the enemy in front and rear and the Dutch were forced to abandon the Island, leaving behind them a ship and over 400 dead.

In 1663 the French West Indies Company took possession of Tortuga. About 1665 the French Governor of that island, Beltrán D'Ogerón, planned the conquest of Puerto Rico. He appeared off the coast with three ships, but a hurricane dispersed his expedition, and he returned to Tortuga, preparing for another invasion. On his second effort the stout resistance of the armed *jibaros* (peasants) forced him to re-embark. French and English buccaneers and filibusters established bases on neighboring islands, harried Spanish ships, and occasionally sacked Puerto Rican towns.

From that time to the end of the eighteenth century, England, too, persisted in her attempts to capture the two most coveted Antilles, Cuba and Puerto Rico. These incessant attacks, not only on Puerto Rico, but on all the other Spanish possessions, and the reprisals they provoked, created such animosity between the people of both countries that open hostilities had commenced before the declaration of war between England and Spain (October 23, 1739). Puerto Rico fortunately did not participate to any great

extent, and for about fifty years the Island was left in peace.]

Smuggling flourished throughout this period, and a Governor of Puerto Rico, Matías de Abadía, officially encouraged it from 1731 to 1742. Vain attempts were made to have San Juan declared a free port. Coffee was introduced from Cuba, and soon became important to the economy of the colony. The agricultural situation was so bad, however, that Charles III sent Alejandro O'Reilly to the Island to report on conditions. O'Reilly made his report in 1765, and some of his suggested reforms were carried out in 1815 (*see Agriculture*). According to O'Reilly's census, the number of inhabitants was 44,883, of whom 5,037 were slaves.

The throne of Spain came into the possession of the Bourbons in 1701, and soon thereafter England, Austria, and the Netherlands entered into an alliance against Spain. The English unsuccessfully attacked Arecibo in 1702, and Loíza in 1703; the Dutch also attempted in 1703 to invade the Island by way of the port of Guayanilla. Other raids followed, including one by the English on Boca Chica in 1742. Ships of several nations used the Danish islands of St. Thomas and St. Croix (today part of the American Virgin Islands) as bases for raids and smuggling. After several expeditions from Puerto Rico, the Spaniards successfully dislodged the British from the island of Vieques, but never succeeded in organizing an expedition to the Virgin Islands.

When the American colonies declared their independence of Britain in 1776, Spain took their part, hoping to profit by a weakening of the power of Great Britain in the New World, without realizing, however, the possible consequences which the example of the British colonies might have for her own possessions later on. When two American vessels, the *Endawock* and the *Henry*, pursued by the

British man-of-war *Glasgow*, took refuge in the port of Mayagüez, they were assisted by the inhabitants. The Mayagüezanos ran up the Spanish flag on both vessels, whereupon the *Glasgow* abandoned the chase.

Toward the end of the 18th century, the defenses of San Juan were greatly strengthened. For about fifty years after the Boca Chica raid, Puerto Rico was left in peace. Then the English, who had taken possession of the island of Trinidad in 1797, again attempted to capture San Juan. Sir Ralph Abercrombie landed a large force at Santurce in 1797, threw up trenches, and placed batteries on Miramar Hill in preparation for a long siege. After two weeks of cannonading and ferocious hand-to-hand fighting, the British were obliged to abandon the attack, and retreated with a loss of nearly 250 dead, many prisoners, and a large quantity of guns, ammunition, and supplies.)

REVOLUTIONARY PERIOD: 1789-1898

(Citizens of the young French Republic aided Puerto Ricans in the defense of San Juan against the English in 1797. The American and French revolutions made themselves felt in the Spanish colonies of the New World, which began to break the bonds that united them to the mother country.

While the great Spanish Empire rapidly disintegrated, Puerto Rico made great strides not only politically, but intellectually (*see Cultural Life*). At varying periods from 1808 on, Puerto Rico enjoyed the status of a Spanish province, with representation in the Cortes. This and other privileges were withdrawn, then re-granted, as the control of the home government shifted between Monarchists and Republicans.

The first formal move toward making Puerto Rico a sovereign state occurred during the first decade of the nine-

teenth century, when the Puerto Rican representative to the Spanish Cortes, Ramón Power y Giralt (1775-1813), demanded the Island's independence. Power's demand derived strength from the revolutionary effervescence in Venezuela, which reached its climax in 1811, and in Santo Domingo (1821). Underground movements, directed in part from St. Thomas, shook the Island in 1823 and 1824. A few years later the first serious step toward secession took place—the uprising of 1835, in which more than 1,500 civilians participated, and which was crushed only after ruthless reprisals. Nonetheless, the revolutionary spirit flared up again three years later in the Military Revolt of 1838. ;

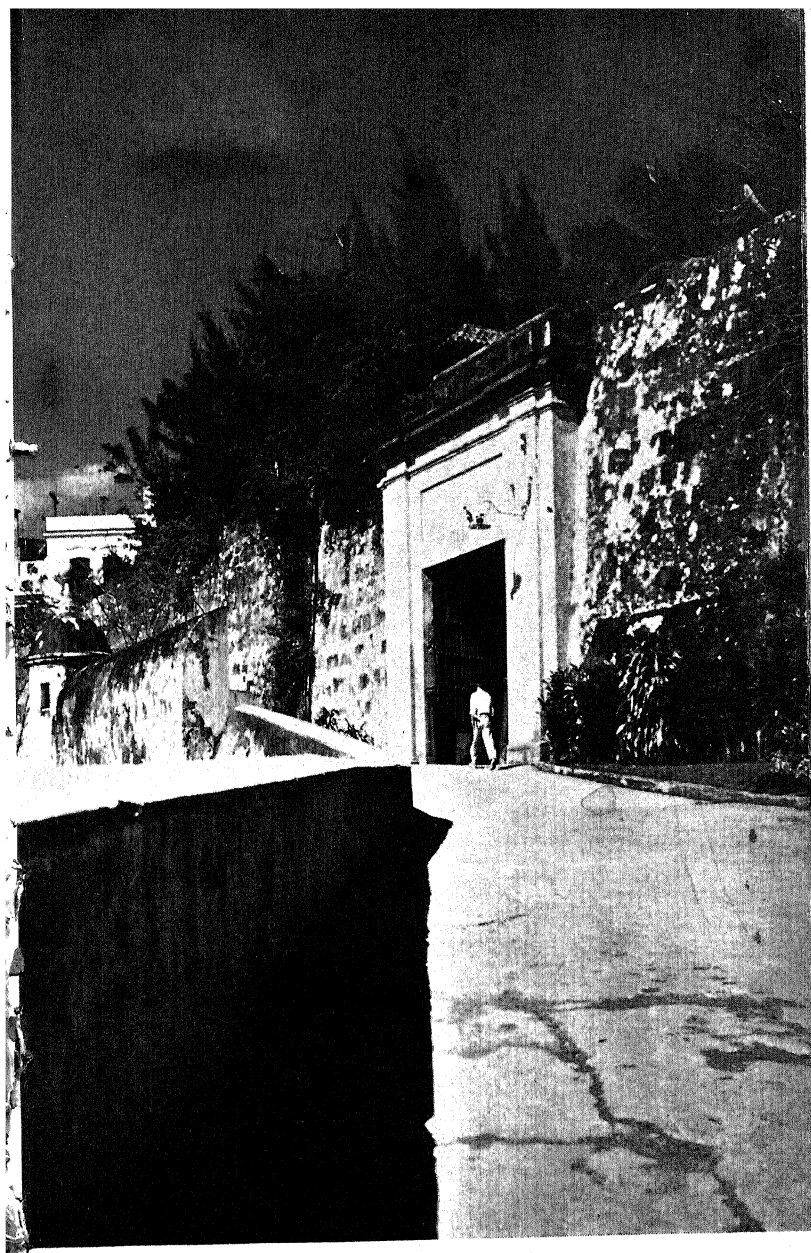
During the 1860's the independence movement came to the fore in at least three uprisings: that of 1864, directed by Luiz Vizcarrondo Padial; that of 1867, sponsored by Benito Montero, Dr. Goico, Dr. Ramón Emeterio Betances and Ruiz Belvis; and especially the Lares Rebellion of September 23, 1868. Generally known as the *Grito de Lares*, this armed protest took place in the town of Lares, with Doctor Betances its spiritual leader. The military leadership was assumed by two foreigners, Matthew Bruckman from the United States, and Manuel Rojas of Venezuela. The Puerto Ricans gallantly defended their three one-star flags embroidered by Mariana Bracety, Dolores Cos, and Eduvigia Beauchamp, but were finally outnumbered by the Spanish forces, and the rebellion was crushed. The leaders were killed or exiled and hundreds of men died of yellow fever in the fetid prisons of Arecibo and Aguadilla.

During the 1870's and 1880's more uprisings occurred: in Yabucoa (1872), Camuy (1873), San Juan (1885), and in Yauco, twelve years later, under the leadership of Fidel Vélez, only eight months before the Royal Decree of Autonomy. But the movement was also carried on by



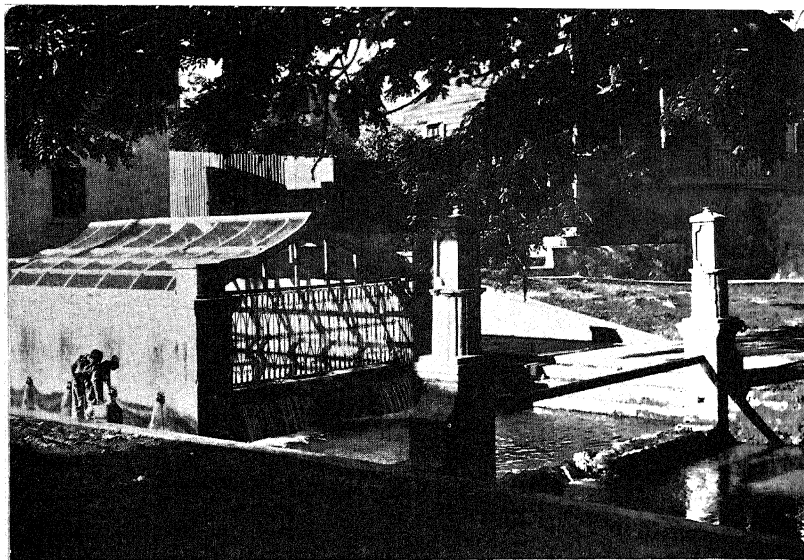
Historic Monuments and Landmarks





W. L. Highton

SAN JUAN GATE



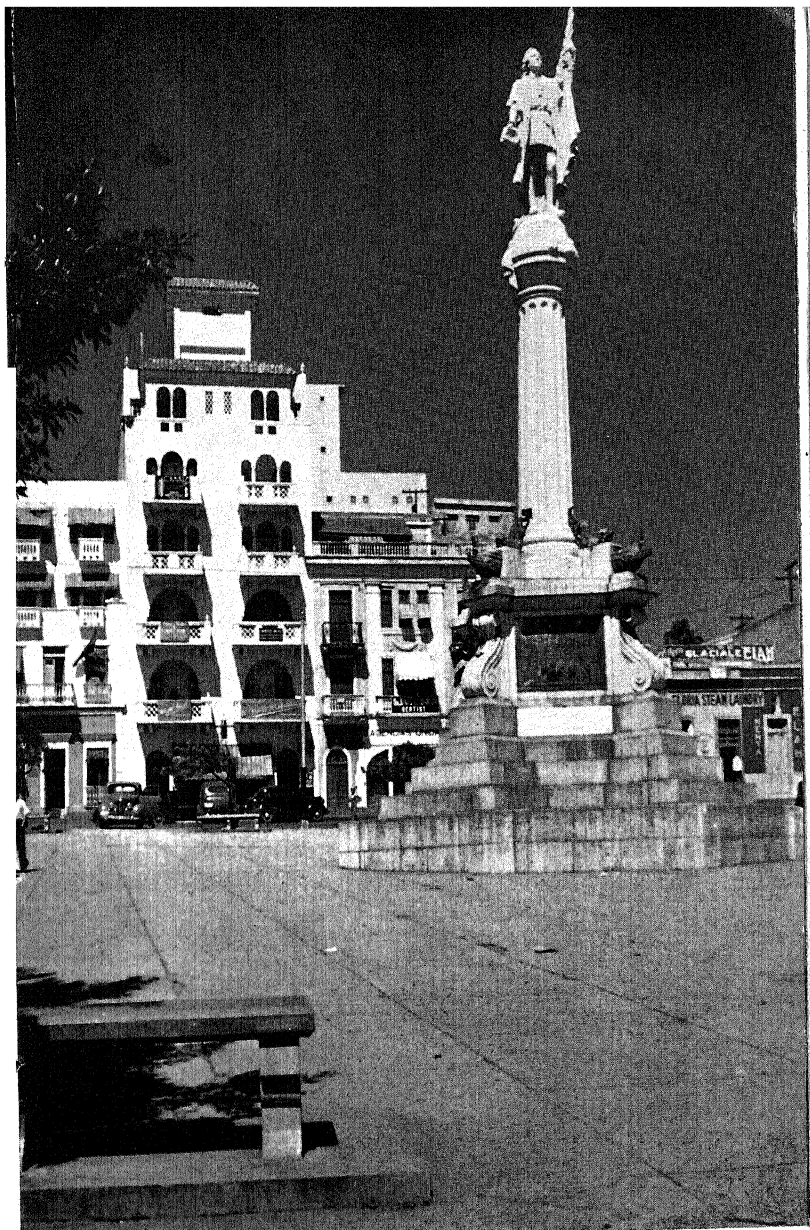
OJO DEL AGUA, AGUADILLA

P. R. Inst. of Tourism

P. R. Inst. of Tourism

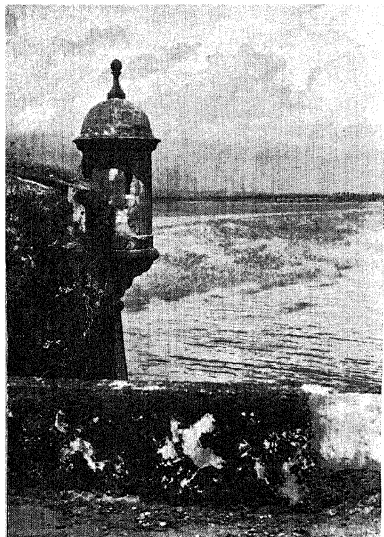
EL MORRO, SAN JUAN





W. L. Highton

COLUMBUS SQUARE, SAN JUAN



Div'n of Ter. and Is. Poss'ns

SENTRY BOX, EL MORRO



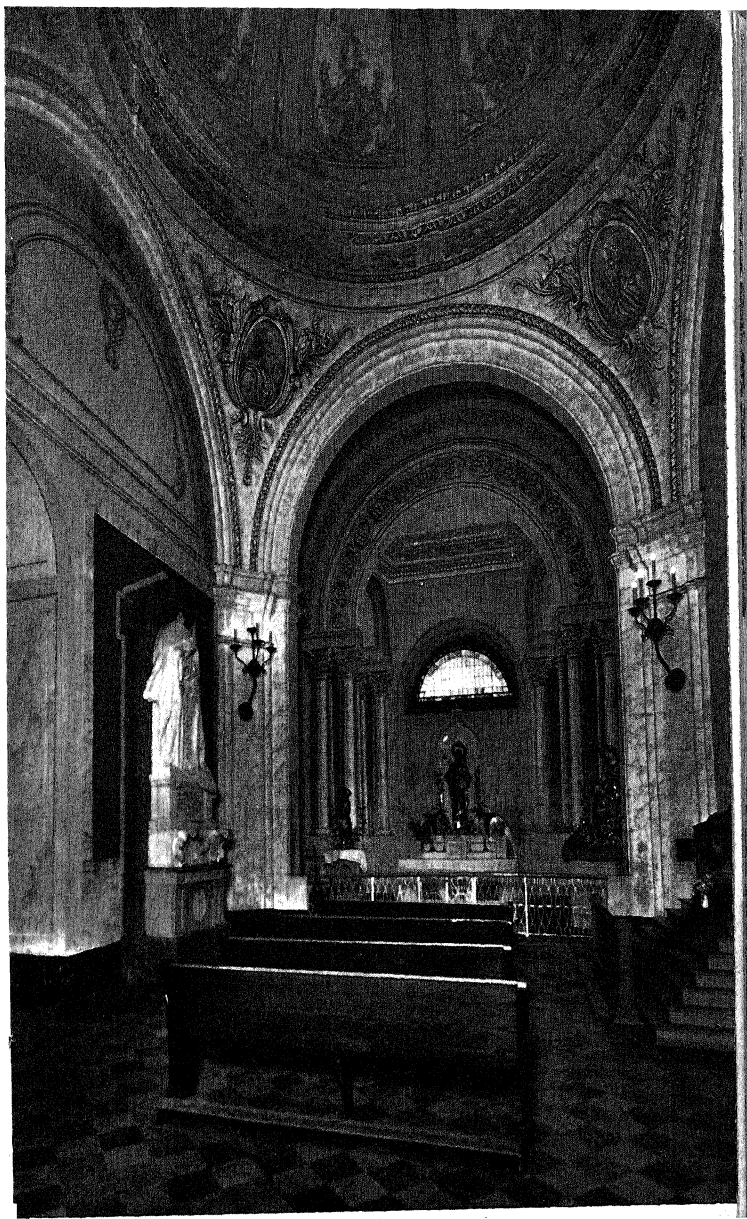
P. R. News Bureau

CASA BLANCA

P. R. Dept. of Agri. and Com.

DINING ROOM, CASA BLANCA





P. R. Inst. of Tourism

TOMB OF PONCE DE LEÓN, SAN JUAN CATHEDRAL

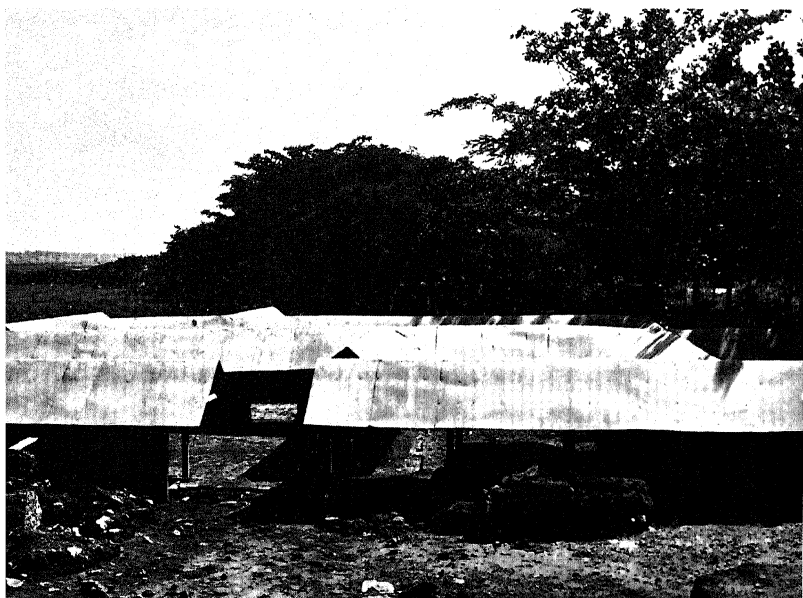


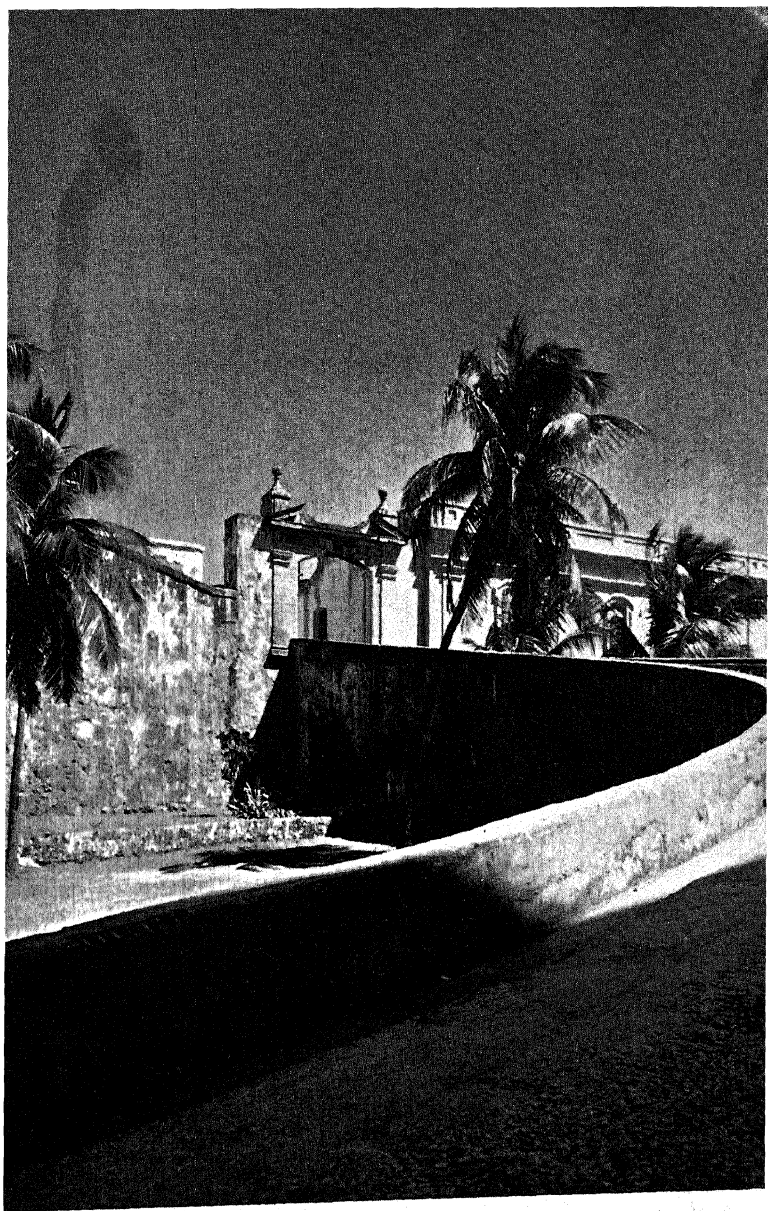
STATUE
OF
PONCE,
SAN JUAN

W. L. Highton

EXCAVATIONS AT SITE OF CAPARRA, HOME OF PONCE

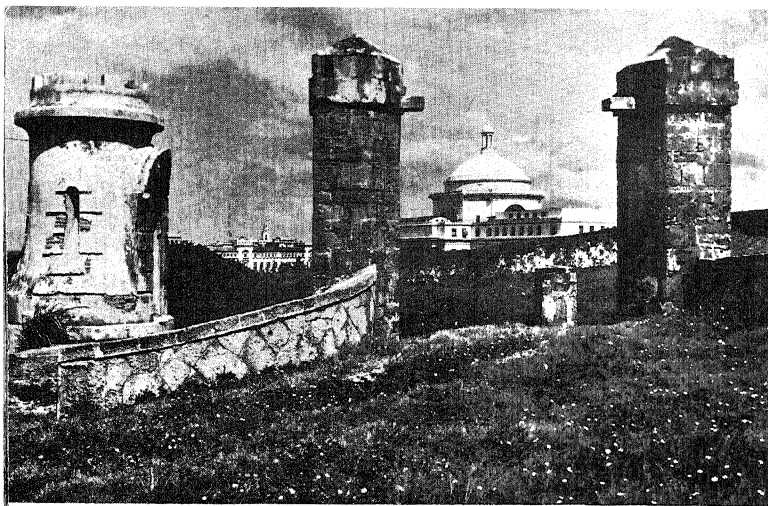
P. R. News Bureau





W. L. Highton

SAN CRISTOBAL, SAN JUAN

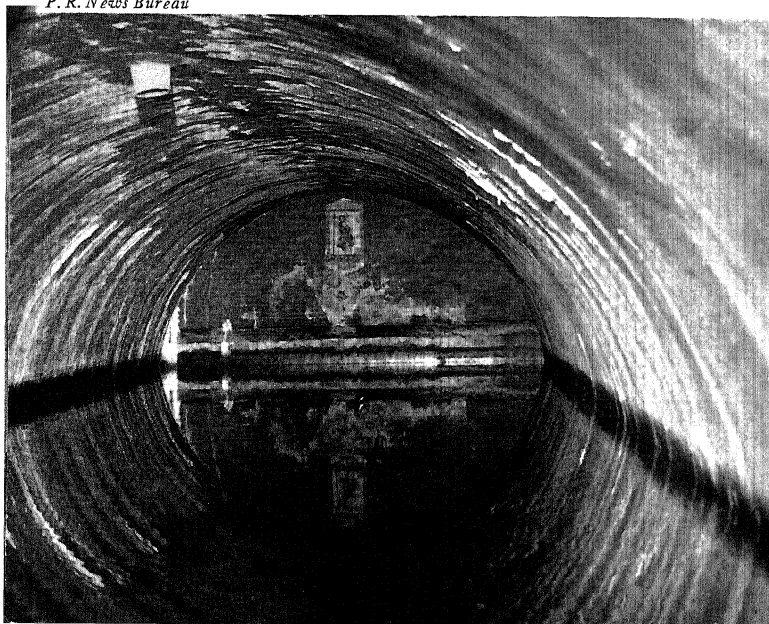


CAPITOL FROM SAN CRISTOBAL

P. R. Inst. of Tourism

P. R. News Bureau

MIRACULOUS CISTERN, SAN CRISTOBAL



parliamentary methods. Parties were formed: the *Union Puertorriqueña*, headed by Rosendo Matienzo Cintrón; the *Partido de la Independencia*, headed by Dr. Zeno Gandia and Rafael del Valle; and finally the *Partido Unionista* which, under the leadership of Luis Muñoz Rivera (1859-1916), became, after 1885, one of Puerto Rico's major political parties. Of historical importance were the Autonomist Assemblies which convened in 1887 and 1891. The latter, held in Mayagüez, brought together the two champions of Puerto Rico's independence, Muñoz Rivera and José de Diego. After 1890 Muñoz Rivera gave the movement its sharpest weapon, the daily newspaper *La Democracia*. Autonomist assemblies convened in 1894, 1895, and 1896. Finally in 1897 Puerto Rico, together with Cuba, was granted autonomy by Royal Decree, and on February 11, 1898, the new regime was inaugurated, continuing until United States troops occupied San Juan, October 18, 1898.

An examination of the political status of Puerto Ricans under the Decree of Autonomy yields little evidence of actual independent government. The political machinery consisted of a governor general and an insular parliament composed of two houses. The governor general represented the king, and as commander-in-chief of the land and naval forces of Puerto Rico exercised military as well as civil authority. He was given the power to refuse to promulgate the laws and resolutions of the parliament, being required only to transmit to the Spanish government a report of why he considered such action necessary. He could thus suspend at will civil rights and constitutional guarantees, and dissolve parliament, enforcing such actions if necessary by ordering out the military and naval forces. In addition, special qualifications, such as ownership of property yielding an annual revenue of at least 4,000 *pesos*, or the possession of a degree from a recognized university, limited member-

ship in the upper house of parliament to the landholding and professional classes. Severe restrictions were also placed on the right to vote.

Many Puerto Rican leaders, among them Félix and Rafael Matos Bernier, saw in the occupation by the Americans a means of hastening total independence, and applauded the sovereignty of the United States. The Liga de Patriotas Puertorriqueños, however, which had been founded by Eugenio María de Hostos, demanded a plebiscite. The movement for independence continued under United States rule, finding leaders such as José de Diego and Muñoz Rivera. It took various forms, as in the platform and manifestos of the Unionist Party, the Asociación Independentista, the youth movement Juventud Nacionalista, and more recently in the Partido Independentista and the Nationalist Party.)

1898-1940

UNDER THE AMERICAN FLAG, 1898-1940

After San Juan had been ineffectually bombarded, on July 25, 1898, General Nelson A. Miles landed 3,400 men at Guánica on the south coast, 15 miles west of Ponce. Miles issued a proclamation assuring peace and justice to the Puerto Ricans, in which he said, "We have not come to make war upon the people of a country that for centuries has been oppressed, but, on the contrary, to bring protection, not only to yourselves but to your property, to promote your prosperity, and to bestow upon you the immunities and blessings of the liberal institutions of our Government." Ponce surrendered on July 28, and after a campaign of only two weeks hostilities were suspended on August 12.

Fortunately the Island was spared the destruction of life and property that normally accompanies war. American troops were not seriously opposed by the Puerto Ricans and

the Spanish troops offered no determined resistance. In the occasional fighting, few on either side were killed, and the number of troops on both sides totalled less than 33,000. Within less than three months the Spanish governor and his staff and troops were headed homeward. On October 18, 1898, Spanish colors were lowered and American flags hoisted in San Juan. The Island and its dependent islets was ceded to the United States on December 10, 1898, by the treaty signed at Paris and ratified on February 6, 1899. In the latter year the first American census, made by the War Department, showed a population of 953,243.

Many Spanish residents would have followed their troops to Spain had their departure been made easy. Actually many found it impossible to leave, for most, if not all their possessions were in Puerto Rico. Efforts to convert property quickly into cash added to the confusion of the early occupation period. As one means of checking confusion, before it became chaos, the foreclosure of mortgages was suspended pending the establishment of more stable conditions. While this policy resulted in instances of individual hardship, it paved the way for an orderly readjustment.

For the next year and a half, until May 1900, the Island was under the rule of a series of military governors, preparatory to the establishment of civil government. The military governors exercised both military and civil functions. General Guy V. Henry, who succeeded General John R. Brooke in December 1898, established by decree four civilian departments of government—state, justice, interior, and treasury. He also brought about the establishment of an Insular police force, which is still the chief law-enforcement body. Both through the military and civil branches of government there was a conscientious attempt to adapt the new regime to long-established customs.

General George W. Davis succeeded to Island command

in May 1899. Freedom of assembly, speech, press, and religion were decreed and an eight-hour day for government employees was established. A public school system was started and the U. S. Postal service was extended to the Island. The highway system was enlarged, and bridges over the more important rivers were constructed. The government lottery was abolished, cock-fighting was forbidden, and a beginning was made toward the establishment of a centralized public health service. Two battalions of soldiers were organized as native troops, and many soldiers who formerly had served under Spain enlisted.

On August 18, 1899, the San Ciriaco Hurricane swept the Island, particularly the southern coast and coffee regions of the mountains, causing the greatest destruction of life and property in decades. Aid in money, food, and clothing was sent from the mainland, \$200,000 being appropriated for the purpose.

Congress approved the Foraker Act, on April 12, 1900, giving the Island its first constitution under the American Government. This act, in effect for 17 years, provided for temporary civil government and the raising of revenues to maintain it. The general administrative officials—the Governor, the Secretary of Puerto Rico, the Attorney General, the Auditor, the Treasurer, the Commissioner of Interior, and the Commissioner of Education—were named by the President, subject to the approval of the United States Senate. The Secretary of Puerto Rico served as acting governor in the absence of the Chief Executive, there being no lieutenant-governor.

The six department heads, together with five others appointed by the President, formed an Executive Council to which was entrusted much of the necessary detail of organization. The five Executive Council appointees were required to be natives of the Island. (The Governmental structure in general provided for participation of both

Puerto Ricans and continental Americans in the executive, legislative, and judicial branches.) Besides its other functions the Executive Council was designated as the upper house of the Legislative Assembly. The Council divided the Island into seven legislative districts, prescribed qualifications for electors, and chose November 6, 1900, for the first election under the new regime.)

A Resident Commissioner to Washington and 35 members of the House of Delegates were chosen. Charles S. Allen, a banker, of Massachusetts, became the first American civil governor of Puerto Rico on May 1, 1900. He had previously served in the American Congress and as an Assistant Secretary of the Navy. The Island was constituted a judicial district with a United States District Court. On June 29 the Supreme Court was organized, the Chief Justice and Associate Justices—two Americans and three Puerto Ricans—being appointed by the President.

(Inhabitants of the Island who were Spanish subjects on April 11, 1899—the date on which cession from Spain was formalized—and their children born subsequent to that date, were held to be citizens of Puerto Rico, unless they preserved their Spanish status. These citizens, together with citizens of the United States residing in Puerto Rico, were constituted a body politic under the name of the People of Puerto Rico. Island laws and ordinances not inconsistent or in conflict with the statutory laws of the United States were continued in force.)

The use of Puerto Rican money was abolished in 1899 and United States currency substituted on the basis of 60 American cents for one peso. This necessitated readjustment of local values, temporarily to the disadvantage of the Island whose economy was based on the peso. At the time coffee was the economic mainstay of the Island, which exported 58,000,000 pounds. The coffee planters, encouraged by a consistent demand for their product in European mar-

kets during the latter half of the nineteenth century, had gone into an orgy of coffee production. They mortgaged their properties in order to buy more land, and the change of currency automatically increased their mortgage burden. This situation, together with the ravages of the San Ciriaco hurricane in 1899 which completely destroyed the coffee plantations, was a death blow to the coffee economy of Puerto Rico. Losing their properties, the planters were forced to migrate to the towns and cities. The coffee workers followed them and were forced to squat on the outskirts of urban communities, giving rise to malodorous slums still in existence. The ruin of the industry, which afforded work to more than half the population, was only a single dramatic instance of the ruin that devaluation of the local currency brought about.

The first Legislative Assembly which met December 3, 1900, had the difficult task of enacting laws in harmony with the policies and theories of the new democratic government, while preserving most of the accumulated laws of four centuries not incompatible with the new sovereignty. By early July 1901, the Legislature had provided new revenue laws for the Island and for the first time in the Island's history a tax was levied on real and personal property.

At the same time free trade was established between Island and mainland, import duties previously levied on Island products entering the United States were abolished, while the full tariff protection given to products of United States origin and manufactures was extended to Puerto Rico. This inclusion of the Island within the American tariff wall was the most important factor in determining Puerto Rico's future economy. Coast-wide shipping laws were made applicable to the Island—all freight between Puerto Rico and the United States had to be carried in American bottoms (the most expensive in the world). As

a result, 90 per cent of the Island's trade, formerly carried on with other countries, is now with the United States.

An important item incorporated into the Organic Act was a resolution of Congress limiting corporations or individual planters to 500 acres of land. Efforts to enforce it, however, were delayed for more than thirty years.

The failure of Congress to grant the Island a territorial form of government and make its people citizens of the United States, as recommended by Henry K. Carroll, special commissioner for the United States to Puerto Rico, who made a careful study of the general social, economic, and political conditions of the Island in 1899, was a great disappointment to the people. They construed the action of Congress as a reflection on their ability to take up their duties as American citizens. Presidents McKinley and Roosevelt consistently recommended American citizenship for Puerto Ricans.

(With civil government established, the Island began to attract North American capital. The tobacco and sugar industries, with their tariff protection, were among the first to be expanded. Sugar soon displaced coffee as Puerto Rico's dominant industry, its fortune linked with the mainland's tariff. Plantation factories making moscovado sugar on individual estates gave way to modern sugar centrals where cane from thousands of acres could be ground. Family properties merged into corporations. By 1900, the 22 centrals and 249 individual sugar haciendas reported in 1899 had been merged into 41 highly modernized sugar centrals.

The growth of the sugar industry to a considerable degree shifted agriculture economy from that of direct consumption crops to commercial crops for export. Development of the tobacco and citrus fruit industries followed the same lines, but coffee, the chief export crop during Spanish days, was not protected by the tariff and sank to an unimportant place.

Other factors contributed to the Island's growth and progress. Construction of highways and public schools afforded wide government employment of labor. The University of Puerto Rico was founded. Construction was commenced on a large hydroelectric project to provide San Juan and the adjacent area with increased power facilities. The campaign against hookworm was renewed after a lapse of ten years. The Island's first passenger elevator was installed in a San Juan department store. Women entered business in greater numbers, and sought careers in the professions. Passenger ships in Island service installed improved long-range wireless equipment. At the beginning of 1914 the first postal savings bank was opened in San Juan. A few months later the government allowed unification of the many local telephone systems. In July 1914, the Federal building at San Juan, costing \$500,000 and under construction for three years, was opened to house the district court, post office, and customs house; it was the first of many United States Government buildings erected during the next twenty years.

With a new administration at Washington in 1912 stimulus was given to Islanders' political aspirations. For the first time Puerto Ricans were appointed to cabinet positions, and within a few months Martin Travieso, Jr., Secretary of Puerto Rico, became acting governor during the absence of the governor—the first Islander to serve as chief executive. Efforts were renewed at Washington for enactment of a new organic act which would extend American citizenship and greater home rule.

The war in Europe gave new stimulus to most Island activities, the effects of which—many of them beneficial—were to be felt for almost a decade. The increase in money value of exports and imports was phenomenal. Sugar, because of its unprecedented high price, experienced the greatest expansion. Coffee, important for the first time under

the American regime, reached an export value of \$9,034,028 in a war year, and tobacco exports reached a total value of \$12,416,388, the highest figure on record. Other products such as coconuts, cigars, citrus fruits, and cotton, which previously had never counted for much in the Island's export trade, played an important part in rolling up the large increase in exports.

In 1916 incomes in excess of \$50,000 each were reported by 20 persons, one of them receiving more than \$100,000. Sugar companies began distributing bonuses to laborers from war earnings; the American Railroad placed sleeping cars on its night trains between San Juan and Ponce; jitneys made their first appearance in San Juan; instruction in pie-making, Yankee style, was given for the first time in home economics classes in the public schools; the first storage tanks for fuel oil were erected in San Juan; and announcement was made of the proposed submarine telephone to link Key West and Havana, the beginning of a project designed to connect the mainland and the chief islands of the West Indies.

(The year 1917 began a new Island epoch. On March 2 Congress passed a new organic act conferring collective American citizenship on Puerto Ricans. The same law gave the Island more home rule, with a completely elective legislature, and transferred from the President of the United States to the governor appointive power for all but two department heads, such power being subject to the advice and consent of the Insular senate.

The new act raised many legal and political questions. Within a few months the Insular and United States District Courts ruled in effect, that the granting of American citizenship implied Territorial status for the Island, but the Supreme Court of the United States, in January 1918, reversed local decisions, resulting in much discussion as to the value of the citizenship attained, a question which be-

came a partisan issue and intensified efforts for statehood and independence.

On July 16, 1917, Islanders, voting as American citizens, chose the first elective legislature and approved prohibition (to become effective in March 1918, more than two years earlier than national prohibition). The legislature, exercising new powers, met the following month.

The declaration of war against Germany by the United States was quickly followed by a request from the Insular Government for army and navy recruiting on the same basis as in the mainland. Actual evidence of war had come early in August 1914, with the appearance of the German cruiser *Karlsruhe* in San Juan, where it took on fuel and food supplies and hastily departed. War fever ran high in the Island following the torpedoing, on June 2, 1917, of the passenger steamer *Carolina* of the Porto Rico Line, on its way from San Juan to New York, by a German submarine off Atlantic city, with a loss of 16 lives. Many of the passengers escaped in life boats, and the schooner *Eva B. Douglas* rescued 252 persons, taking them to New York City. In July 1917, 104,986 men of military age were registered, from whom 12,852 were called for service the following November. The Puerto Rican regiment was the first United States Army troop to be moved during the War, being transferred to the Canal Zone.

The war gave rise to a number of new problems and difficulties in the administration of the Island. There arose the danger of interrupted communications with the mainland, through the loss or withdrawal of ships engaged in trade. The mere possibility of restricted shipping facilities not only filled the people with alarm, since most of their foodstuffs came from the United States, but it also tended to increase food prices. But a law was passed creating a food commission to guard against food shortage and profiteering, prompting a campaign for the increased pro-

duction of local crops. Ten weeks after its organization, the Food Commission announced that 127,000 acres were under cultivation and had produced crops valued at \$3,977,000.

In October 1918, a severe earthquake was felt throughout the Island, causing great damage and loss of life at Mayagüez, and lesser damage along the west coast. The tremors continued for several weeks.

With the war over, Puerto Rico experienced another period of economic dislocation. Fortunes were lost, principally from the collapse of the sugar industry, the product suddenly dropping from a record 23 cents a pound to 3 cents. The low prices of other crops, chiefly coffee and tobacco, strained the financial structure of the Island, and the readjustment of wages that followed the war also brought about a drop in price of local products.

With "normalcy" restored, the spring legislative assembly of 1919 planned for an era of economic development. There was great activity in public improvements, municipalities as well as the Insular Government expending many millions of dollars, obtained from the sale of bonds for schools, hospitals, irrigation, highways, bridges and hydro-electric expansion. The employment thus provided offset in many instances the temporary inactivity of private enterprise. The needlework industry, started in a small way about this time, continued to expand until it became the second largest industry in the Island, employing more than 50,000 women in the neighborhood of Mayagüez, the center. The industry passed, early in its development, from one of high individual skill to mass production. Formerly it had been a home occupation for women who created veritable masterpieces on imported linen and other expensive material. Today the cut cotton fabric is shipped from New York to be handsewn in Island factories run by native managers. Since 1932 the industry has increased in volume

from twelve to twenty million dollars. In 1939 this industry went through a period of readjustment due to the provisions of the Federal Wages and Hours Law (*see Labor*).

On the political scene there appeared a trend toward liberal thought. The legislature passed a minimum wage law for women. The election in 1920 of Santiago Iglesias (died 1939), as the first Socialist senator, marked the rise of the Socialist Party as a major party in insular politics. Iglesias was also elected Resident Commissioner at Washington in 1932 and 1936. Women became active in public affairs, and in 1932 gained the franchise. In April of that year more than 150,000 women registered for the first time, preliminary to November voting, in which Puerto Rico elected the first woman legislator in Latin America.

The opening of the School of Tropical Medicine, in 1926, marked an important achievement. Jointly sponsored by the University of Puerto Rico and Columbia University, New York, it became the first school of tropical medicine in the Americas. As a graduate school for advanced research it soon achieved an excellent reputation.

With increasing frequency political leaders were voicing their aspirations. In October 1927, the President of the Senate and the Speaker of the House sent a lengthy memorial to President Coolidge urging him, before his retirement, to seek from Congress legislation to give Puerto Rico an elective governor. This move was urged as a step to strengthen, not weaken, ties between Island and mainland. The following January, during the Pan American Conference at Havana, the same officials cabled the President requesting that Puerto Rico be made a Free State. A similar message to the American people was entrusted to Colonel Charles A. Lindbergh upon his visit to the Island in 1927. To this President Coolidge replied, "The United

States has made no promise to the people of Puerto Rico that has not been more than fulfilled."

The Island's agriculture, in its various aspects, was on the threshold of an economic crisis. Sugar had not been profitable since its collapse in 1921, which had reduced employment and wages, wiped out previous profits in many instances, and increased indebtedness in many more. Moreover, the San Felipe hurricane of September 13, 1928 completely ruined the fruit and coffee industries. Some weeks later a survey fixed the losses at \$85,000,000—the greatest the Island had ever known. The American Red Cross was prompt with aid and Congress later created the Hurricane Relief Commission providing \$6,000,000, largely for rural reconstruction.

In March 1929 leaders of the Republican and Socialist parties presented a memorial to President Hoover asking for an Island loan of \$100,000,000 to refund public indebtedness and provide for a program of health education and industrialization. This memorial was the first attempt to outline a program of Island reconstruction.

The Brookings Institution of Washington, an organization devoted to public service through research and training in the humanistic sciences, in an effort to present to the American public a true picture of conditions in Puerto Rico, made an extensive socio-economic survey of the Island. Its report, published in 1930, became the basis of later plans which were carried into effect by emergency and reconstruction agencies.

Puerto Rico was further demoralized by another hurricane, on September 27, 1932, St. Ciprian's Day. Two hundred people were killed, a thousand injured, and property damage reached \$40,000,000.

Relief came a year later, when in September the Puerto Rican Emergency Relief Administration (PRERA) was established and given a credit of \$900,000, two-thirds of it

from the Federal treasury. This was the beginning of a new policy toward the Island, which within two years was to expand into a program of rehabilitation and reconstruction for which many millions would be allocated.

The Federal government soon realized, however, that relief alone could not solve the difficult problems that had accumulated with the years. Something had to be done toward finding a way for a permanent reconstruction of the Island's socio-economic structure. The Puerto Rico Policy Commission, composed of outstanding Island leaders of science and letters, was called to Washington late in 1933 to prepare and present a study of Puerto Rico's problems, and to make recommendations for their solution. The Commission presented its findings in June 1934, stating in general terms what came to be known as the "Chardón Plan." It said in part that "the economic problem of Puerto Rico, insofar as the bulk of its people is concerned, may be reduced to the simple terms of progressive landlessness, chronic unemployment, and implacable growth of the population. A policy of fundamental reconstruction should, therefore, contemplate the definite reduction of unemployment to a point, at least, where it may be adequately dealt with by normal relief agencies; the achievement of this, largely by restoration of the land to the people that cultivate it, and by the fullest development of the industrial possibilities of the Island."

Shortly thereafter President Franklin D. Roosevelt came to the Island. His visit was preceded by the earlier ones of Mrs. Eleanor Roosevelt and of Federal officials, who informed him on actual conditions. Conferences were held in Washington on the feasibility of a land policy for the Island tending to bring about a progressive reduction of the large estates and the redistribution of land by means of an extensive homestead program.

Several circumstances served to bring new revenues into

the Island's depleted treasury. Prohibition repeal by constitutional amendment re-established the rum, alcohol, and beer industries which prior to the Volstead Act had afforded much employment to the Island's large population. In 1938 rum and alcohol exports reached 694,216 gallons with a value of \$3,106,279. The lottery was legalized again, in 1934, after 36 years: nearly one million dollars was thus made available in 1938-9 to combat tuberculosis and to provide health and charitable services to municipalities of the second and third classes. Cockfighting, a favorite pastime on the Island, was also legalized.

In June 1934 the President by Executive Order created the Division of Territories and Island Possessions in the Department of the Interior, and transferred to it the supervision of Puerto Rican affairs which had been held by the Bureau of Insular Affairs in the War Department.

In May 1935 the President issued an Executive Order creating the Puerto Rico Reconstruction Administration to outline a program of approved projects for providing relief and work relief, and appointed Ernest Gruening, the Director of the Division of Territories, as its Administrator. Secretary of the Interior Harold L. Ickes visited the Island in January 1936. In the enforcement of the 500-acre law Secretary Ickes saw a fundamental move toward a solution of the Island's troubles and declared, "The heavy population of Puerto Rico presents a very serious problem. Moreover, the greater part of the cultivated land in Puerto Rico is in the hands of a few big companies. The breaking of these big sugar estates into small holdings and the enforcement of the 500-acre law in accordance with the mandate of Congress has been too long delayed." The Insular Department of Justice, immediately thereafter, instituted legal proceedings against Rubert Hermanos, Inc., a sugar corporation, and on July 30, 1938, the Supreme Court of Puerto Rico handed down a decision in favor of the Insular

Government. This decision was reversed in 1939 by the Court of Appeals in Boston, the judicial district to which the Island is attached. However, on a writ of certiorari, the Supreme Court of the United States in 1940 reversed the Boston Court, and a decision was rendered in favor of the Insular Government. Other similar cases are now pending before the courts.

Under the successive administering by Harold L. Ickes, Secretary of the Interior, and Admiral William D. Leahy, Governor of Puerto Rico, the program of the PRRA has followed the objectives pointed out in a letter of President Roosevelt dated August 1, 1935, in which he said, "Diversification of agricultural production will be sought by the program in order that the Island may approach a self-sustaining status. Cheap and available electric power, good roads, reforestation, and adequate housing are also essential." For its operation the Act provided a special fund consisting of sums allocated to the Island under the E.R.A. Act of 1935, which remain available for obligation until June 30, 1940, and a revolving fund derived from the operations financed out of the special fund and the proceeds of disposition of property acquired. Up to March 31, 1940, Federal funds amounting to about \$66,000,000 had been allocated for the operation of the plan. Since 1939 the emphasis of the PRRA has shifted from furnishing work relief as such to the continuing of rural rehabilitation for needy persons. Work relief was taken over by WPA in 1940.

Despite sincere and earnest efforts on the part of Federal authorities and Island leaders to bring Puerto Rico out of chaos, unrest became acute early in the thirties. The problems arising from widespread low standards of living were intensified by the constant increase in population which since 1899 has grown at the rate of 40,000 per year, and unemployment, which by the summer of 1934 had reached

a total of approximately 350,000 and is estimated to have affected 75 per cent of the entire population. In an effort to alleviate population pressure, the Insular Government passed a birth-control law in 1937, but its enforcement was delayed by a test of its constitutionality in the Federal courts. Findings of the courts and amendments to the Puerto Rican penal code now make it legal to advertise means of preventing conception.

One manifestation of unrest attracted wide attention in Puerto Rico and the United States: the revolutionary actions of members of the Nationalist Party, founded by Pedro Albizu Campos in 1922. Fervid Nationalists in the 1930's clashed violently with constituted authority. Albizu and other leaders were sentenced in 1936 to seven years in the Federal penitentiary at Atlanta for conspiring to overthrow the United States Government in Puerto Rico and for recruiting an army to oppose the authority of the United States.

Puerto Rico hopes to continue its economic and cultural advances. With its excellent strategic position, its Latin American history and language, and its North American citizenship, the Island is destined perhaps to fulfill a role of meeting place between the two great cultures of the Western Hemisphere.

Government

ELECTIONS in Puerto Rico are held every four years. Usually the three main political parties are the only serious contenders. The Legislature is composed of a Senate and a House of Representatives. Two senators are elected from each of the seven senatorial districts of the Island, and five at large. The House is made up of thirty-nine representatives, one for each of the thirty-five representative districts, and four at large. The President of the Senate is usually the leader of the political party in power; the head of the House is called the Speaker. The Legislature assembles on the second Tuesday after the first Monday in February every year, and laws enacted by it are subject to the Governor's veto.

The Governor of Puerto Rico is appointed by the President of the United States with the consent of the United States Senate. His cabinet, under the name of Executive Council, is composed of the following department heads: Agriculture and Commerce, Education, Health, Finance, Justice, Interior, and Labor.

The Commissioner of Education, the Attorney General, and the Auditor are appointed by the President of the United States. The other department heads are appointed by the Governor with the advice and consent of the Puerto Rico Senate.

A Resident Commissioner to the United States is elected every four years by popular vote. He has a voice but no vote in the United States House of Representatives, and is

recognized by Cabinet members. His salary is paid by the Federal government.

Puerto Rico makes its own tax laws, and retains all its local revenues, including all the customs, revenues, and internal revenue taxes which in the incorporated Territories are deposited in the United States Treasury for the entire nation. Puerto Rico, moreover, is exempted from Federal inheritance and income taxes. Financially speaking, therefore, the Island occupies a favorable position. It has no power over its tariff.

POLITICAL PARTIES

In 1866 three prominent Puerto Ricans, José Julián Acosta, Francisco Mariano Quiñones, and Segundo Ruíz Belvis journeyed to Madrid to petition for reforms for the Spanish Antilles and particularly for the abolition of Negro slavery. They also asked for representation in the Spanish Cortes for Puerto Rico, and for the right of municipalities to manage their own affairs.

Political parties such as exist today in Puerto Rico were then unknown. The Spanish Government looked with suspicion on any kind of association, and the people of Puerto Rico lacked any political organ by means of which they could express their needs.

Elections were held in 1869 to designate eleven representatives to the Spanish Cortes. Two political groups were formed: the Liberals and the Conservatives, the latter unconditionally Spanish in sympathy. Of the eleven representatives, the Liberals succeeded in electing three: Román Baldorioty de Castro, Luis Padial, and José Eurípides de Escoriza.

The following year, out of the Liberal group was formed the Liberal Reform Party, its program based on the reforms asked for by Acosta, Quiñones, and Ruíz Belvis.

The appearance, at least, of municipal autonomy was conceded as the result of the activities of the first political party of Puerto Ricans, but, more important, the first article of the Spanish Constitution of 1869, which contained the Declaration of the Rights of Man, was applied to Puerto Rico, and Negro slavery was abolished. The first steps toward the organization of political opinion in the Island had secured for its people important concessions.

The Liberal Reform Party was reorganized in 1883, and its platform changed in an effort to reconcile the differences between Puerto Ricans and liberal Spaniards. Its aim was to make Puerto Rico's political standing identical with that of provinces in Spain. Thus a decree in the official *Gazeta de Madrid* would have the same force in Puerto Rico as in any part of the Spanish mainland. Opposed to this aim were the Autonomists, who held their first convention in Ponce in 1887, with Román Baldorioty de Castro as chairman. The Autonomists adopted as their platform "the greatest decentralization possible with national unity," demanding the right of Puerto Ricans to manage their own affairs, their actions to be controlled only by the Supreme Court. This radical program encountered great opposition from the Spanish Government, which attempted to suppress the Autonomist Party as a "conspiracy against the Government by means of secret political association." Under a Military Governor sent to Puerto Rico for the purpose, lists were drawn up of suspects to be questioned. Autonomists, among them some of the great Puerto Rican patriots, were arrested, imprisoned in El Morro, and beaten in an effort to extort confessions. Letter and cable communication with Spain were cut off by the authorities to prevent news of the terror reaching Spanish and other European liberals. When the news was finally smuggled out of Puerto Rico, such was the general

indignation that the Military Governor was recalled and the Autonomists released.

A convention of the Autonomists was again called in 1891. Baldorioty de Castro had died, and the chairman was the aged Francisco Mariano Quiñones. New leaders appeared, among them Luis Muñoz Rivera, who proposed an understanding with the Spanish Liberal Party, and José de Diego. Meanwhile the Spanish Government applied to the Puerto Ricans the degrading category of "Spaniards of the third class," and anti-Spanish sentiment on the Island became intensified.

A third convention of the Autonomists was held in 1894. For a second time Muñoz Rivera attempted to swing the Party into a fusion with the Liberal Party of Spain. A delegation was finally sent to Spain with this end in view. An agreement was reached with Práxedes M. Sagasta, head of the Liberal Party of Spain, and ratified by a majority of the Autonomists in Puerto Rico in 1897. The majority of the Autonomists now became, as a consequence of this pact with the Spanish party, the Liberal Fusionist Party. The members of the Autonomist Party who were against the pact formed the Pure and Orthodox Party, claiming that the agreement with Sagasta would result in a local government that was autonomist in appearance only.

Sagasta became the prime minister of the Spanish Government in August 1897, and in November a Royal Decree was signed which gave autonomous governments to Cuba and Puerto Rico. The autonomous government was actually inaugurated in Puerto Rico on February 9, 1898 (*see History*). Its first cabinet consisted of a coalition of members of the Liberal and Pure and Orthodox Parties. The two groups soon reunited into the Union Autonomist Liberal Party, which endured until American sovereignty became effective on October 18, 1898.

The new government gave rise to new political parties.

From the old Liberals arose the Federal Party, which in 1902 became the Union Party. From the Pure and Orthodox faction arose the Republican Party. In 1908 was formed the Workers Party, which in 1912 became the Socialist Party (unaffiliated, however, with either Socialist International).

A dissident faction within the Republican Party became in 1924 the Constitutional Historical Party. But in the 1928 elections, party differences were merged in two coalitions: the Puerto Rico Alliance and a coalition between the Socialists and the Constitutionalists. The Alliance won. In 1932, however, the former head of the Union Party, Dr. Antonio R. Barceló, withdrew with his supporters from the Alliance and formed the Liberal Party. The remaining members of the Alliance and the Constitutionalists formed the Union Republican Party, at its head Rafael Martínez Nadal. The Socialist Party continued as before to be headed by Santiago Iglesias, with Bolívar Pagán (Resident Commissioner from Puerto Rico 1939-) its president *pro tempore*. In the elections of 1932 and 1936 a coalition between the Socialists and the Union Republicans triumphed over the Liberal Party. Antonio R. Barceló died in 1938, and his place at the head of the Liberals was taken by José Ramírez Santibáñez. In the same year there began the formation of a new party, the Popular Democratic Party, headed by Luis Muñoz Marín, son of Luis Muñoz Rivera.

Agriculture

THE agriculture of Puerto Rico is specialized and commercial, devoted primarily to crops which can be sold in the United States. It is subject to all the hazards of an external market in which other tropical countries compete, and its shippers are never certain about the stability of their tariff protection, which corresponds to that given similar industries on the mainland. But there is no alternative to specialization within the existing tariff walls and the system of market distribution based on quotas. If all the arable land on the Island were planted to food crops for domestic consumption rather than cash crops for export, it would not begin to support the total population.

Such crops as sugar cane, tobacco, and citrus fruits have proved the most remunerative. Besides paying excellent dividends to producers, especially in the case of sugar cane, they have employed a large part of the population. It is estimated that sugar cane alone has an annual pay roll equivalent to 55 or 60 per cent of the gross income of the crop. This figure in a normal year under quota restriction may amount to approximately \$30,000,000. Considering the density of population and the high prices of farms, there is no choice but to devote the best lands to the highest yielding crops. The problem lies in the redistribution of land and the reduction of absentee ownership, which exports profits with products.

Puerto Rico has depended on agriculture since the primitive tribal economy of the Boriquén Indians. Although the

gold-seeking *conquistadores* were hardly concerned with the development of agriculture, Ponce de León appreciated the richness of the soil and had some land cleared for farming near Caparra and at the estuary of the Toa or La Plata River. On the latter site the first agricultural experiment station and grange in the New World developed, where experiments were carried on with crops from other lands and livestock were acclimated. This was "La Granja de Los Reyes Católicos" (Their Catholic Majesties' Grange).

In 1765 the King of Spain commissioned Don Alejandro O'Reilly to visit the colony and make a report of his impressions. In his report to the Crown, O'Reilly recommended that skilled artisans and farmers be sent to the Island; a government-owned sugar mill be installed; uncultivated lands belonging to neglected grants be confiscated by the Crown and divided among the new farmers; and that crops be brought to the mill of the Crown for grinding. He also recommended that provision be made for vocational education in agriculture, and the opening of adequate markets for crops. One of the chief obstacles to the development of agriculture at that time was the lack of laborers, as the only people allowed to settle in Puerto Rico were Spaniards. In 1778, however, agriculture was greatly stimulated as the result of a Royal Decree issued by the King of Spain, allowing foreign Catholic laborers to emigrate to the Island, where lands were given them. In 1815 a Royal Decree of Grace was issued whereby all foreigners were admitted to Puerto Rico. For the first time in their colonial history the Islanders were allowed to trade with other nations and to import farm implements and machinery free of duty.

The establishment of two experimental farms, one in Río Piedras and the other in Mayagüez in 1886, inaugurated the scientific study of agriculture in Puerto Rico and led to systematized plant introduction. The opening of the

United States Experiment Station in Mayagüez in 1902 marked the beginning of a new era in scientific agricultural research. In 1905 a land-grant college of agriculture was established. In 1910 the Sugar Producers Association organized an experiment station in Río Piedras which in 1914 became the Insular Experiment Station. The Insular Department of Agriculture was established in 1917. Through the United States Department of Agriculture, plants of economic importance have been introduced or improved. Sugar cane varieties have been imported which are resistant to the highly troublesome mosaic or yellow-stripe disease, discovered here in 1915, and plant quarantine measures have served to check the disease. Imported varieties—immune, resistant, or tolerant to mosaic—were propagated on government farms and distributed free to farmers. It has been generally recognized that this work saved the sugar industry of the Island from ruin. In the three-year period 1918-20, for example, the damage was estimated at twelve to fifteen million dollars. The new varieties that replaced the diseased and susceptible canes have also resulted in increased sugar yields.

Important food plants, such as rice, mangos, avocados, maize, coffee, and green cover crops have been introduced into the Island. The experiment stations have improved livestock by introducing better breeds of cattle and other domestic animals. Fertilizers are being used for nearly all important crops. Soil studies are carried on to increase the efficient use of land through fertilization and conservation methods, and a survey of all the soils of the Island has been made.

The use of insecticides and fungicides for the control of diseases and insect pests affecting crops has become widespread, and research institutions have been responsible for the introduction of parasites that destroy insect pests. A few years ago one of the experiment stations introduced

the toad (*Bufo marinus*), a blessing to agriculture because it has kept the mole cricket (*changa*) and the root borer or white grub (*gusano blanco*) in check.

An agricultural extension service has been of great benefit in bringing research information to the farmers. The College of Agriculture of the University of Puerto Rico, a potent factor in agricultural development, supplies trained personnel to all agricultural enterprises, private and public.

In recent years soil conservation practices have been introduced as a measure in solving the Island's agricultural and population problems. The general opinion in Puerto Rico has regarded overpopulation as the fundamental problem of the Island. However, soil conservation experts believe that population pressure can be largely relieved by more efficient utilization of the land. To assist in attaining this objective, the Soil Conservation Service of the United States Department of Agriculture has established in the Island, through the co-operation of the Puerto Rico Reconstruction Administration and Insular Experiment Stations, an office for the purpose of carrying on investigations and demonstrations and developing the best means for conserving soil and moisture. The work has attracted much attention because of its value to the future welfare of the farmers of the Island.

The problem of land concentration in Puerto Rico, in view of the limited area and dense population, continually raises the issue of absentee ownership. A large portion of farm land, particularly the most productive, is not available for the use of the natives. This situation goes far toward explaining the social and economic extremes in Puerto Rico, the incidence of illiteracy, child labor, and primitive living standards, and the especial wretchedness of farm laborer families.

According to the 1935 census, 246,386 persons 10 years old and over depended on agriculture for a living. Only

50,003 of them, or approximately 20 per cent, were farm owners or tenants. The others were classified as managers, foremen, and day laborers. As the population of the Island increased since 1910, the proportion of owners and tenants on the land decreased. The rate of decrease in this period amounted to about 10 per cent.

The problem is further aggravated by the loss of ownership among small farmers and the growth of large holdings. Since 1910 the proportion of land worked by owners to the total under cultivation has declined by about 10 per cent. More than one-third of all the agricultural land is worked by managers in the employ of absentee owners, yet these managed farms represent only about 7 per cent of the total number.

The cattle industry began with the first animals landed in 1509. Subsequently the Island received domestic animals from Europe, some directly and some through Santo Domingo. This industry has not been of great importance in Puerto Rico's economy since the American occupation.

The development of the livestock industry has been handicapped by the use of pasture lands for sugar plantations. In recent years, however, dairying has progressed considerably. There are well-kept dairy farms in districts near the cities and larger towns. The grade of dairy herds has been improved by the introduction of Guernsey, Holstein, Jersey, Ayrshire, and Shorthorn strains, and work cattle have been cross-bred with Zebu or Brahman types. In spite of this, the local market cannot supply the demand, and the Island must depend on the importation of dairy products. The mountain regions, however, offer possibilities for the development of industry, when roads and hydroelectric power are made available for the farmers.

In order to increase the production of milk and its consumption by the poorer classes, goat raising has been encouraged, particularly in the drier areas.

The Government maintains a number of veterinarians at the service of the livestock owners, and a systematic and well-co-ordinated campaign is in force for the control of tuberculosis. An animal found infected with the disease is immediately slaughtered and the Government compensates the owner at the rate of about \$45 per head. A report of December 31, 1936, shows that twelve municipalities have been accredited as free from tuberculosis. Cattle ticks have presented another obstacle to the livestock industry. Though efforts at eradication were made in the past by the Insular Government nothing systematic was done until 1936, when the Puerto Rico Reconstruction Administration launched its program against the pest. Satisfactory results have thus far been secured: the western third of Puerto Rico has been freed of ticks, and it is expected that they will be eliminated from the entire Island before the end of 1940.

The Puerto Rico Reconstruction Administration has undertaken a plan to educate the laborer in modern agricultural and soil conservation methods, and toward a better standard of living and health.

The Central Lafayette, under French ownership for about a century, was purchased in 1936 by recently organized co-operatives, using funds borrowed from the Puerto Rico Reconstruction Administration. It was the intention of the purchasers to divide the land among agricultural laborers and new cane planters, and to pay off the debt with a portion of the income from cane brought to the grinding mill, owned co-operatively by the *colonos* (cane planters) and agricultural laborers. Concrete houses, small but comfortable and clean, with garden plots, have been erected for the laborers. In raising the standard of living, the standard of ambition is also raised, and the laborer works with a will to keep his house and ground he has contracted for.

Another sugar co-operative, Central Los Caños, began operation near Arecibo in 1939.

Hurricanes have frequently wrecked the Island's agriculture. Those of 1899, 1928, and 1932 were especially bad, and the 1928 hurricane is remembered as the most serious calamity in this century.

SUGAR. During the Spanish regime coffee was the principal export product, sugar and tobacco occupying second and third places. With the change of sovereignty, the production of sugar cane rapidly increased, and by the beginning of the twentieth century it was the Island's most important commodity. Since that time the growing of sugar cane has continued to increase. As early as 1553, Puerto Rico was exporting some 24,000 pounds of sugar to Spain. Towards the close of the sixteenth century sugar production in Puerto Rico amounted to nearly 400,000 pounds, but this precocious development suffered a setback during the last years of the sixteenth century and early seventeenth.

In the nineteenth century, the production of sugar showed a gradual and steady rise from 9,391 tons to 52,089 tons in 1899. The production in 1879 was nearly twice that of any year between 1872 and 1878. Production mounted higher in 1880 and 1884. At the time of the American occupation sugar production amounted to approximately 60,285 tons. In 1899 a hurricane caused serious damage to the crop. The beginning of the twentieth century marked a rise in sugar production that has continued, with slight intervals of decrease, until today. From 81,526 tons in 1900, production rose to 992,335 tons in 1932, and 1,103,822 tons in 1934. In 1938-9 sugar shipments valued at \$53,604,381 were exported to the United States. This sum constituted about two-thirds of the Island's total export to the United States.

TOBACCO. The rise of the tobacco industry has fluctuated. Since the time of the Spanish sovereignty, Puerto

Rican tobacco has enjoyed a reputation for good quality, a fact which allowed it to sell in competition with the best grades of Cuban tobacco. The American sovereignty opened new and better markets to the industry. Several American companies opened cigar and cigarette factories in Puerto Rico and purchased some of the best lands in order to grow their own leaf. They also purchased the bulk of the Island crop. Tobacco in Puerto Rico is grown mainly in the mountainous region of the interior, east from Utuado to San Lorenzo. Most of it is of the cigarfiller type, but until 1926 much was used as a wrapper. Chewing tobacco is grown in the northern and southern regions. Exports of leaf tobacco, mainly to the United States, increased from \$1,232,058 in 1907 to a little less than \$3,000,000 in 1914 and nearly \$14,000,000 in 1921. Between 1922 and 1926, exports fluctuated between \$9,000,000 and \$14,000,000. In 1927 Puerto Rico exported tobacco valued at nearly \$21,000,000. In 1939-40 exported tobacco was valued at \$7,464,394. In exports, tobacco occupies third place among Puerto Rican products.

COFFEE. During the Spanish regime, the Island's coffee was popular in the Spanish, French, Italian, and other European markets, which took about 50,000,000 pounds of it annually. Production reached a maximum in 1915. The plantations were almost destroyed by the hurricane of September 1928, and as a consequence, European buyers were forced to look elsewhere for their supplies. Trade barriers erected against Puerto Rican products by various European countries also considerably reduced exportation. The greatest coffee exports of this century were those of 1913 and were valued at \$8,511,316. In 1939-40 the export of coffee amounted to 3,258,639 pounds valued at \$475,316.

Efforts are being made by the Insular Department of



Agriculture, Industry, and Commerce





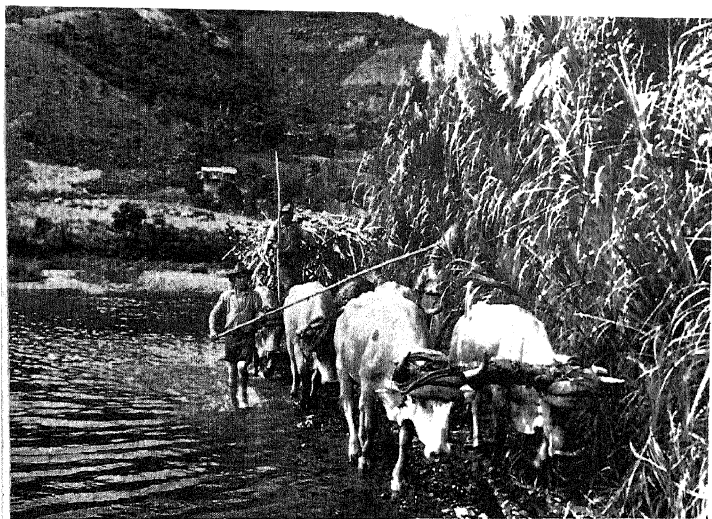
P. R. Inst. of Tourism

PASTURE NEAR ARECIBO

TRUCK GARDEN

P. R. Reconstruction Adm'n

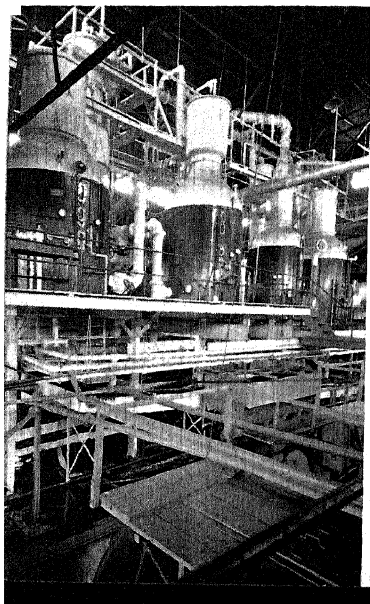




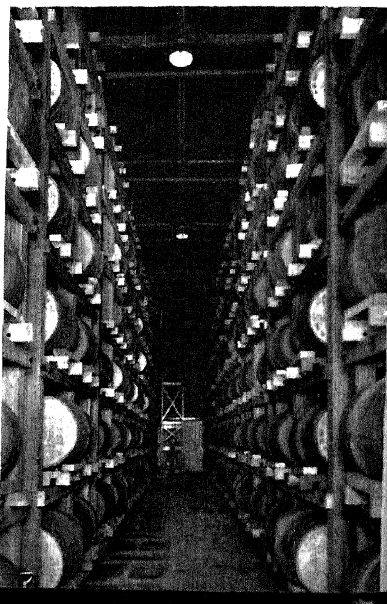
TAKING CANE TO CENTRAL

W. L. Highton

INTERIOR, SUGAR CENTRAL
P. R. Reconstruction Adm'n



RUM WAREHOUSE
J. R. Nieves & Cia.





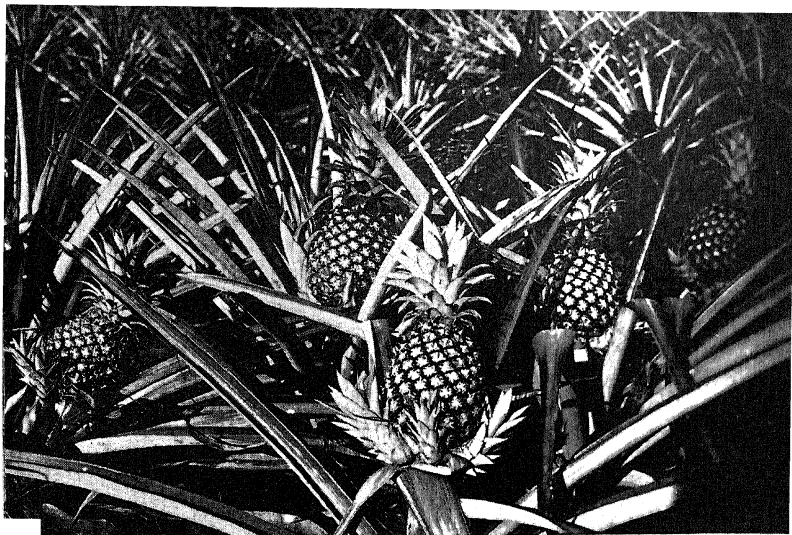
P. R. Inst. of Tourism

TOBACCO FIELD

PICKING COFFEE

P. R. Reconstruction Adm'n





PINEAPPLES

Div'n. of Ter. and Is. Poss'ns

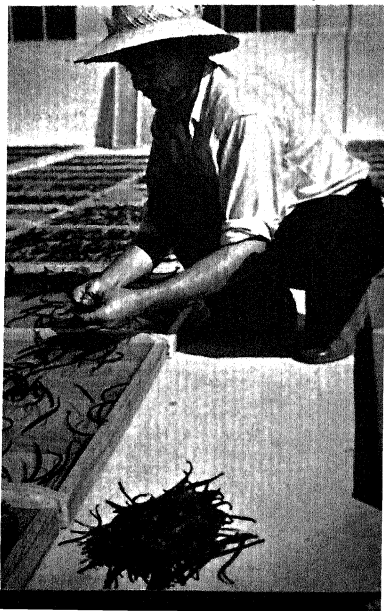
BANANAS

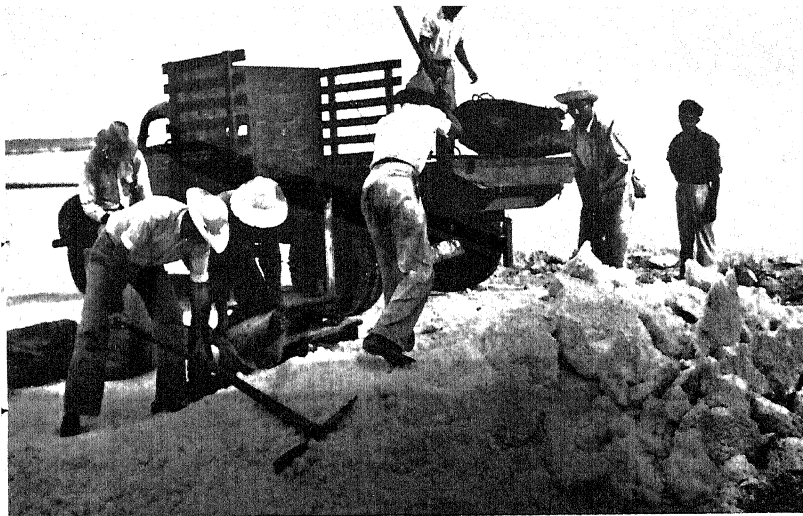
Div'n. of Ter. and Is. Poss'ns



CURING VANILLA

W. L. Highton





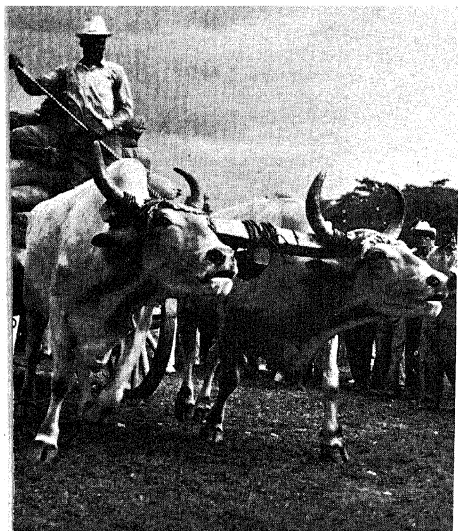
W. L. Highton

SALT WORKS AT CABO ROJO

FISHING VILLAGE

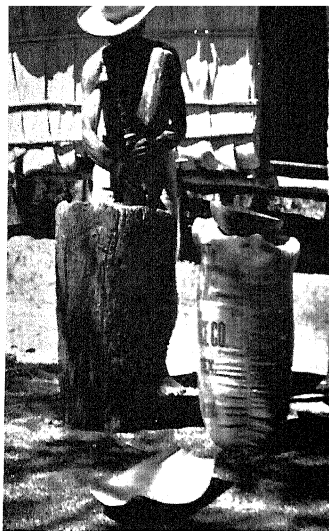
W. L. Highton





PRIZE OXEN

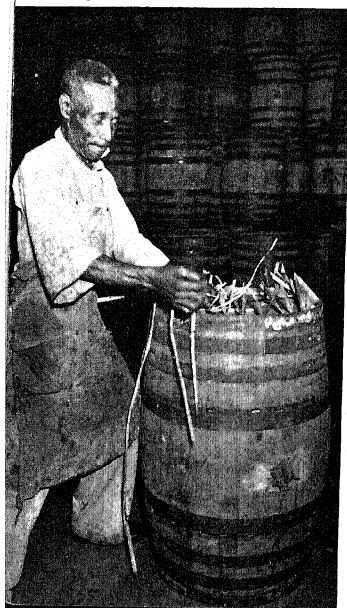
P. R. News Bureau



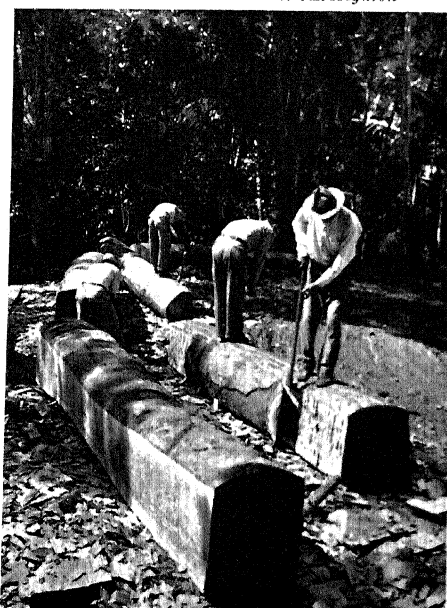
GRINDING GRAIN

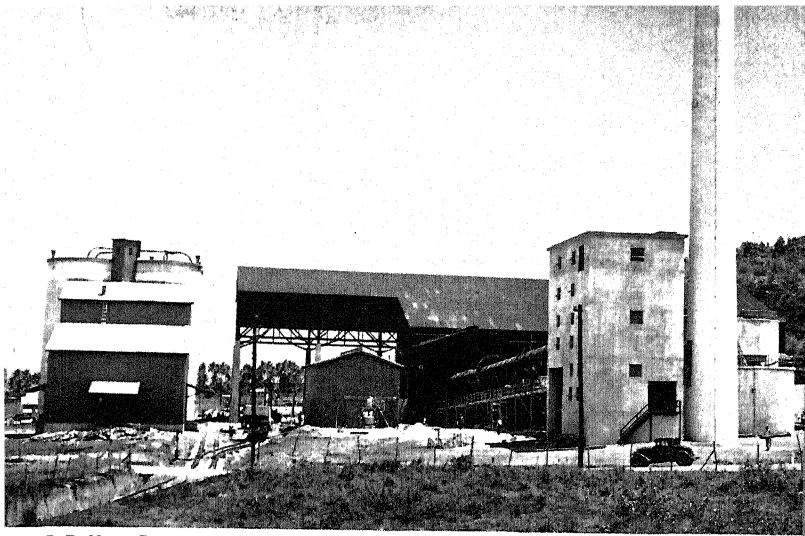
W. L. Hight

REPAIRING RUM BARREL
W. L. Highton



SHAPING LOGS, CARIBBEAN NATIONAL
FOREST
W. L. Highton





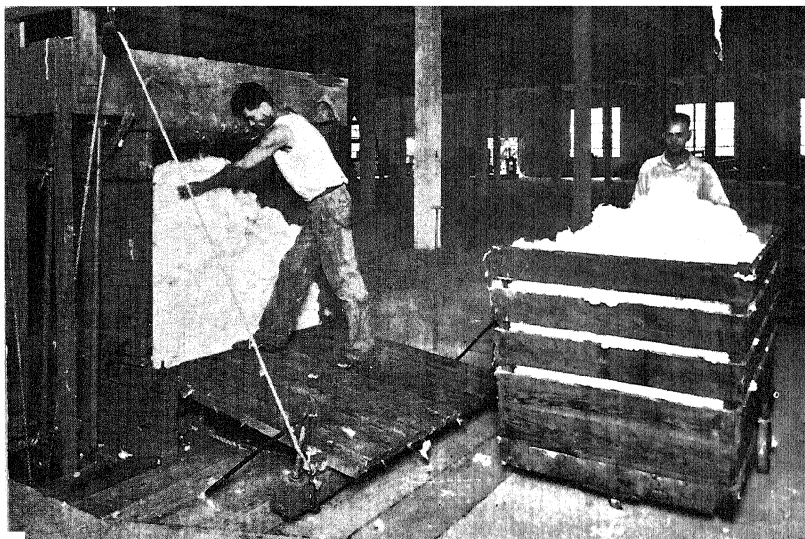
P. R. News Bureau

INSULAR CEMENT PLANT

GARMENT WORKERS

P. R. Reconstruction Adm'n





BALING SEA-ISLAND COTTON

P. R. Reconstruction Adm'n.

P. R. News Bureau

DOCKS, SAN JUAN



Agriculture to find a market for the coffee surplus. Production in 1939-40 was 23,498,000 pounds.

FRUITS. Shortly after the War with Spain a few Americans, some of them ex-soldiers who came with the army in 1898, began the cultivation of citrus fruits. Oranges, grapefruit, and limes were growing wild, and a few felt confident enough in the future of citrus to make small commercial plantings, principally grapefruit. The fruit enjoys a good reputation in both the American and European markets, especially in England where it generally brings a better price than the fruit from other countries.

Fruit exports to the United States showed a steady increase from 1901, when they were valued at \$109,801, up to 1930. The figure rose to \$1,000,000 in 1908, to more than \$2,000,000 in 1911 and more than \$3,000,000 in 1930. The tropical storm of September 1928 completely destroyed the crop, causing heavy damage to trees, buildings, machinery, and supplies, and inflicting a total loss of \$2,214,000 on the citrus industry. Again in 1932 more than 92 per cent of the fruit industry was destroyed by another storm. The industry in Puerto Rico has also suffered from competition with other regions. In 1939-40, \$1,352,604 worth of fresh, canned, or preserved fruits were exported.

Limes have been exported in small quantities in the past; an increasing demand for them is expected. In the last few years pineapples have been widely planted on a commercial scale. Bananas and plantains furnish important staple products for the population, and are not exported. Other fruit crops are avocado, mango, soursop, breadfruit, pomegranate, cashew, and níspero (*sapota*).

MISCELLANEOUS. With the exception of head lettuce, all the important vegetables of the temperate zone grow satisfactorily on the Island, and moderate quantities of tomatoes, peppers, cucumbers, squash, eggplant, okra, and string beans are shipped to the northern markets. High

quality potatoes are grown from tubers imported from the United States, and all are consumed in the local market. Onions of the Bermuda type grow successfully in the coastal lands, especially on the northwestern section of the Island but, since the culture is intensive and wholly by hand, the cost of production does not permit exportation.

The diet that prevails even today among many Puerto Ricans in rural areas—polished rice, beans, and codfish—is expensive and inadequate from the health standpoint. The Department of Education has for many years striven to encourage the planting of garden vegetables. A campaign to raise vegetables and other garden produce was waged under the administration of Dr. Paul Gerard Miller, former Commissioner of Education, and was followed by a similar campaign during the World War. The home economics teachers of the Department of Education since 1914, and the teachers of the second unit schools since they were established in 1928-29, have also encouraged the growing of vegetables. Since 1936 the PRRA has done much to encourage the planting of garden vegetables and their general introduction into Puerto Rican diet.

Root crops such as sweet potatoes, cassava, yams, dash-
een and taro, are staples for the Puerto Rican peasant. Were it not for these foodstuffs his diet would be even more deficient. Other crops grown wholly for home consumption are corn, beans, pigeon peas, cowpeas, peanuts, and sesame. Corn, beans, and pigeon peas are grown on a large scale in regions where crop diversification is practiced.

Ginger, of Asiatic origin, became an important crop in the seventeenth century, taking first place among export products in the year 1644, but today it is grown only in small quantities in the interior where the climate is especially suitable.

The coconut industry, severely damaged by hurricanes,

shows alternative periods of prosperity and depression. Export values of this crop rose from \$8,334 in 1901 to \$129,793 in 1906 and steadily up to \$1,888,321 in 1927, dropping to \$523,070 in 1929 as a result of the hurricane. In 1939-40 exports of coconuts were valued at \$308,620.

Rice, an important crop at a time when land and labor were cheap, is now grown only in the higher altitudes. The total production is scanty compared with the large quantities imported every month from the United States. It is a main item on native tables.

Cacao, from which cocoa is obtained, was important in the early days of the Island. Plantations growing cacao suffered severely from the hurricanes, and this factor, together with the competition of other countries, has practically eliminated its production.

Cotton of the long-staple, sea island type is grown in small areas in the southern and northwestern parts of Puerto Rico, along the coastal region. Until 1932 nearly 10,000 acres were planted to cotton. Then a sudden loss of the market in the United States reduced the acreage to almost nothing. A new beginning was made in the crop season of 1934-35, and in 1939-40, 250,174 pounds of cotton lint, valued at \$74,595, were exported.

Industry, Commerce, and Labor

THE industries of Puerto Rico consist principally in the processing of agricultural products (sugar-cane, coffee, tobacco), and the finishing by cheap hand labor of products manufactured in the United States (cotton, linen, and silk garments). Three principal factors have thus far prevented the development of industry on a large scale: the lack of minerals and fuel resources; the fact that most profits are exported, allowing no great local accumulation of capital for re-investment; and the lack of tariff protection for local industry against the "dumping" of competitive products made in the United States.

The early Spanish settlers worked mines estimated to have produced about \$4,000,000 in gold. When these were depleted, the colonists turned to agriculture. Tobacco, maize, and root crops had been cultivated by the Boriquén Indians prior to the arrival of the *hidalgos*. In the year 1516 sugar-cane was planted for the first time, marking one of the most significant events in the history of the Island.

During the Colonial period local industries were handicapped by restrictive policies of the home government, the lack of capital, and inadequate transportation. An example was the prohibition of the natives from distilling rum, in order to preserve the market for Spanish wines.

At the end of the eighteenth century, most of the agricultural products were still for local and domestic use, with

little surplus to export. Ginger, sugar, molasses, and hides were the principal products. Tobacco was acquiring commercial importance, but Spain made a monopoly of it. Native molasses found a good market in the New England colonies. It was this by-product of the sugar cane that came to constitute one of the leading exports of the triangular trade, carried chiefly by Yankee clippers, which prospered between New England ports, the West Indies, and the slave-exporting ports of Africa. Ginger cultivation was temporarily prohibited in 1603, many of the settlers having found its cultivation easier than sugar, and consequently abandoning the production of sugar.

Up to 1778 the only people allowed to settle in Puerto Rico were Spaniards; but a royal decree in that year allowed foreign Catholic laborers to settle, and lands were given them. This was modified by the "Decree of Grace" of 1815, whereby all foreigners of whatsoever faith from friendly nations were admitted. A royal order in 1813 appointed consuls to Puerto Rico, but it was not until 1820 that North American consuls arrived. In 1816 certain restrictions were adopted which required immigrants who had not established domicile to leave the Island in three months' time. This order marked the golden age of Puerto Rico. Not only did its population increase, but its commerce and agriculture rapidly developed. The first statistics on the Island's trade were published February 13, 1827. In 1834, 1,247 vessels called at her ports, 300 being American. From that date onward, trade flourished.

Cattle raising was an important and lucrative industry from early colonial days, and remained so until pasture lands began to be turned into sugar fields. In 1899 it ranked fourth as a source of wealth, netting more than half a million dollars a year. Cattle were exported to the Virgin Islands and French and British Caribbean possessions.

The sugar industry is today mainly dependent on United

States demand. All sugar, except that held for home consumption, is shipped to the mainland. There are 45 modern *centrales* or sugar mills, scattered throughout the Island, with a capital investment of \$56,000,000. Industrial by-products of the sugar cane are molasses, alcohol, and bagasse. The last has acquired potential importance as a raw material for building-board, but as yet has not been commercially developed.

The distillation of rum and alcohol is one of the oldest industries of Puerto Rico, and was rapidly increasing in importance until the passage of the Insular prohibition law. Since the repeal of the 18th amendment, several million dollars have been invested in distilleries, of which there are 11 large and a number of smaller units. The type of rum is similar to that of Cuba, and it is rapidly becoming popular in the United States and Europe. The exportation in 1939-40 of rum to the United States amounted to 700,618 gallons valued at \$3,194,849.

Most of the tobacco grown in Puerto Rico is stripped at home and then shipped to the United States, where it is manufactured in blends with other cigar tobaccos. Large quantities of cigars and cigarettes, however, are manufactured locally. Practically all the cigarettes made are for the local market, but over half the cigars are exported to the mainland. Peak production was reached in 1920, when 321,340,198 cigars and 581,348,820 cigarettes were made. The industry has had a serious set-back due to economic conditions throughout the world, and to the two severe hurricanes of 1928 and 1932. The competition of American cigarettes has also been a retarding factor. There are about seventy cigar factories and one manufacturing cigarettes, and many tobacco-stripping establishments.

The coffee industry is exclusively in the hands of native agriculturists, many of whom are small land owners, and for that reason it is called "the small man's crop." Most

of the coffee exported has gone to Europe in the past, but only \$51,785 worth was exported to foreign countries in 1939-40. Very little has been consumed in the United States until recently, because of the fierce competition it has to meet from other mild coffee. Although coffee is a "small man's crop," and less valuable than sugar, tobacco, and fruit, it is of peculiar practical and sentimental interest to the Island, and the subject of much Puerto Rican legislation. In order to increase domestic consumption of native coffee, the Insular Legislature has imposed a tax of 18 cents per pound on all imported roasted coffee. There are seven large coffee roasting plants on the Island, and several small ones. The 1939-40 crop amounted to 23,498,000 pounds, only 3,258,699 pounds of which were exported to the United States.

The fruit industry started on a large scale after the American occupation. Grapefruit, pineapple, limes, lemons, and coconuts are the chief fruits both for local consumption and export. Bananas, avocados, mangos, melons, caimitos, nísperos, and other tropical fruits are raised for domestic consumption only.

There are more than 75 fruit-packing plants in operation. The estimated yield of "wild" oranges for 1939 was 800,000 crates and that of grapefruit 350,000 crates. The pineapple production has increased greatly.

The fruit-canning industry has made excellent progress in Puerto Rico since its establishment shortly before 1915. There are six canning factories with the most modern machinery turning out excellent quality products under strictly sanitary conditions. Their normal combined export per annum is from 250,000 to 350,000 cases. In 1938-39 the value of canned fruit shipped to the United States amounted to \$368,017.

When American immigration laws closed the doors to

imported cheap labor from Europe and Asia, certain continental United States industries affected by this restriction found in Puerto Rico abundant cheap labor for the manufacture of their products. The most notable instance has been in the needle work and garment industry. Embroideries of all kinds, handkerchiefs, ladies' dresses, and ladies' underwear, many of them of excellent workmanship, are manufactured in about 150 organized shops and in innumerable homes by countless women and girls who do individual work for contractors. At the French Colonial Exposition in 1931, Puerto Rican hand embroideries won several Grand Prix and gold medals in competition with the best work from all parts of the world. The finest quality of Puerto Rican hand-made silk lingerie is sold in the best stores of many of the largest cities of the United States.

Fine children's garments and millinery are also important items in the Island's manufactures. There are about 30 establishments of importance and many smaller shops that manufacture men's cotton and linen trousers and complete suits, as well as men's shirts and underwear. All these garments are well made, and are gaining much favor in the United States for summer wear. Woolen rug making is also becoming an important industry.

Cotton, linen, wool, rayon, and silk manufactures of all kinds, valued at \$14,845,703, were exported to the United States in 1939-40. Practically all the materials for these manufactures were imported from the mainland.

The cotton industry is concerned only with raising the crop, ginning it, and sending the lint to the United States.

Other small industries include the processing or manufacture of cattle feed, fertilizer, quick lime, furniture from native or imported hardwoods, salt from sea water, buttons, straw articles, hair nets, silk stockings, preserved fruits and candy, and the cutting and polishing of jewels.

COMMERCE

At the time of the American occupation more than 90 per cent of Puerto Rican trade was with countries other than the United States. Today, 90 per cent of the total Island trade is with the mainland and 10 per cent with other countries. Puerto Rico has become the United States' second-best customer in Latin America, and in 1938 ranked tenth in the world as a market for mainland goods.

The increase in volume of the Island's total export trade since 1898 has been tremendous. In 1901 it amounted to \$8,583,967; in 1939 it was \$86,486,570. Trade with the United States in 1890 was about 22 per cent of that year's total export trade; in 1939 about 95 per cent.

The chief reasons for the Island's commercial progress since 1900 have been the introduction of American capital, and the ready access to the American market. Under the Spanish rule trade in agricultural products—the Island's chief source of wealth—found little encouragement. High import and export duties frustrated any expansion of external trade. A further boost to native goods came when the Island was placed under the United States tariff structure. This resulted in a rapid development of the agricultural resources.

Puerto Rico in 1939 imported \$75,684,719 worth of goods from the United States. Most of the imports were food items. Others were cotton manufactures, iron and steel manufactures, cigarettes, automobiles, machinery, and fertilizers. Imports from other countries amounted to \$7,039,563.

Exports to the United States amounted to \$84,782,650. Besides sugar, fruits and tobacco, the United States bought Island coconuts, coffee, vegetables, hides, skins, and cotton, linen, and silk manufactures. Exports to foreign countries amounted to \$1,703,920 in 1939.

The advantages of the American tariff are offset, however, by the terms of the coastwise shipping act as it applies to Puerto Rico. Only American ships may carry freight between the Island and continental United States.

The domestic commerce of Puerto Rico is lively and fast-moving throughout the Island, especially in the larger cities and towns, but particularly so in San Juan, its commercial metropolis and capital. Modern stores of all types, well stocked with merchandise of every description, are found in every town.

The aggregate bank deposits for the fiscal year 1937-38 amounted to \$680,743,106, while in 1939 they increased to \$683,650,195.

Co-operative marketing associations have been operating successfully since the early 1930's. The Puerto Rico Reconstruction Administration is particularly interested in this movement, and is aiding individual farmers and small manufacturers who wish to start co-operatives.

LABOR

With the Spanish Conquest came the *repartimientos* or distribution of the Indians among the colonists (*see History*). A peace-loving race was dispossessed of its heritage and enslaved by the *conquistadores* in the mines and on the plantations. They found, however, in Father Bartolomé de las Casas a protector and militant exponent of their cause. This Franciscan friar spent a lifetime writing on behalf of the emancipation of the aborigines. His work *La Historia de las Indias* is an indignant protest against the treatment of the Indians by his fellow-countrymen. Word finally reached Rome, and on May 29, 1537, Pope Pius III issued a Bull excommunicating all settlers who practiced slavery among the Indians, or deprived them of their property even though they were pagans. The

reward for Father Las Casas' untiring efforts came in 1542 when the natives were freed, but almost too late, for by that time they had become practically extinct, victims of hard labor and warfare.

Negro slaves were first brought to the Island in 1513, for as early as this date there was already a lack of Indian labor. Beginning with the year 1560, Negroes were officially branded with the *carimbo* hot stamp on their foreheads, showing that they had been brought in legally and preventing their abduction from the Island by buccaneers and traders. This practice was abolished in 1784, and by 1820 the importation of slaves had ceased. In 1848 the purchase of freedom was made possible for children of slaves at 25 *pesos* per child at the time of baptism, and on March 22, 1873 all slaves were set free. A loan of 8,000,000 *pesos* was made by the government to reimburse slaveholders.

In 1848, under the administration of Governor General Don Juan de la Pezuela, a system of employee records was introduced which tended to penalize the more industrious laborers and to keep them employed at a minimum wage. Governor Messina in 1862 decreed that laborers be paid in money instead of scrip, which had been the general practice; the decree, however, was disregarded. Workers were helpless, for they had no organization and there was no legislation to protect their rights. They were obliged to exchange the scrip for food in stores owned by employers. Goods were often of poor quality and underweight, while prices were comparatively high. Workmen who dared demand their wages in money did so at the risk of their jobs. These conditions have apparently not totally disappeared, despite legislation to the contrary. There are still many complaints made to the Department of Labor by workmen who are forced to deal at company stores.

The organized labor movement began to spread in Puerto

Rico just before the Spanish-American War. At the time there existed several craft societies of workers called *gremios*. Labor, however, had no political or civil rights. Propaganda meetings or assemblies were outlawed as illegal and criminal.

In 1896 the Regional Federation of Workers of Puerto Rico was established as a chapter of the Spanish Federation which was later outlawed in Spain. The Island Chapter consequently met the same fate.

In 1902, four years after the American occupation, the courts decided that laborers were entitled to the right of assembly. The decision was followed by the enactment of laws granting the right to organize and strike, forbidding employers to pay their employees with scrip or forcing them to buy in company stores, and other laws favorable to labor. The eight-hour work day for government employees had been proclaimed in 1899 by Major-General John M. Brooke, then the military Governor of the Island.

The labor movement spread rapidly throughout the Island. By 1905, 123 unions had been organized. An Insular Federation of Labor was organized which became affiliated with the American Federation of Labor in the United States. Later it became known as *La Federación Libre del Trabajo*.

The organized labor movement has for many years been largely identified with the Socialist party. The advances made by labor in the Island during the last quarter of a century have been instrumental in the formation of the Socialist Party of today.

During the administration of Governor Theodore Roosevelt, Jr., the workers' interests were promoted through the creation of the Insular Department of Labor, established by an act of Congress passed as an amendment to the 1917 Organic Act of the Island. Besides the Mediation and Conciliation Commission, which acts as a mediator between

employers and employees in settling disputes, the Department maintains the following bureaus: the division of inspection, investigation, and interpretation of labor laws; employment service; division of accounts, property, and statistics; wage protection and claim bureau; bureau of women and children; division of economic social research and investigation; homestead commission; industrial commission dealing with workmen's compensation service; and the board of examiners of social workers. The department, through the Commissioner of Labor, makes an annual report to the Governor of the Island and publishes the *Puerto Rico Labor News* in Spanish and English.

During the World War period the cost of living steadily increased, but wages did not keep pace with it. Labor presented a united front, and after much agitation and dispute between planters and laborers, wages were raised. In the period immediately after the war, however, Puerto Rico experienced a depression in the sugar industry which resulted in a lowering of wages. This was followed by plantation strikes, in many cases accompanied by cane-field fires, intimidation, riot, and even murder, provoked or incited by *mayordomos*, *capataces*, and the police force at the service of the employers.

The chief handicap to the labor movement in Puerto Rico has been an over-crowded labor market and a low standard of living. Even during the height of prosperity, employment could not keep pace with increasing population. In addition, high land prices tempted *colonos* to sell their farms and crowd into the cities to spend the proceeds. In this manner many thousands of acres of land passed into the hands of absentee-owners, and in rapidly increasing numbers, Puerto Ricans who once had jobs as well as land found themselves without either. In addition, the state of affairs summed up in the frequently-repeated statement that

Puerto Ricans "produce what they do not eat, and eat what they do not produce" added to the low standard of living.

In the early 1930's, the Island's economic and financial life was at its lowest ebb. The Puerto Rico Emergency Relief Administration was organized in August, 1933, to provide direct relief, but soon branched into work relief and devoted its efforts toward economic reconstruction. In October, 1935, this agency gave way to the Federal Relief Administration, which continued relief work.

In 1936 the Puerto Rico Reconstruction Administration took over the work initiated by the two former relief agencies. The Administration aims at something more permanent than temporary work relief projects.

By the end of 1939, the Administration had provided labor to the extent of 139,626,321 man-hours. The peak of employment had been reached in November 1936, just prior to the beginning of the annual sugar harvest, when a total of 59,062 were employed, 95.5 per cent from relief rolls. In November 1939, due to curtailment of funds, 22,964 persons only were employed. The Work Projects Administration set up in the fall of 1939 a separate organization, with Governor Leahy as administrator, to prosecute work relief projects similar to those formerly undertaken by the PRRA, which shifted its emphasis away from work relief as such to the continuance of rural rehabilitation for needy persons.

According to the census of 1935, sugar as an industry provided the greatest employment, with 94,718 listed as working on farms and 16,162 in *centrales* or factories—a total of 110,880. Needlework ranked second, with 50,371 reported sewing in the home, 13,202 working in clothing factories, and 6,655 in embroidery and kindred factories—a total of 70,228. Tobacco ranked third as an industry providing employment, with 38,186 reported working on tobacco farms and 14,714 employed in processing plants,

and cigar and cigarette factories. The number of employable workers without employment has been variously estimated up to a maximum of 350,000.

The revival of Act 45 on April 1, 1937, which was approved by the Insular Legislature on June 9, 1919, established minimum wages for working women, but caused general dissatisfaction among industrialists all over the Island. This act declares it to be unlawful for any employer of women and girls in industrial and commercial occupations or public service undertakings in Puerto Rico to pay wages lower than \$4.00 per week to women under 18 years of age and less than \$6.00 per week to women over 18 years. The Supreme Court of Puerto Rico declared this act constitutional in 1920 and again in 1921, but in 1924 declared it unconstitutional, and so it stayed until the Commissioner of Labor revived the law in 1937. The needlework industry attacked the constitutionality and validity of the law before the District Court of San Juan and applied for an injunction to prevent the Commissioner of Labor from enforcing its provisions. At the same time the members of that industry contended that the law did not apply to home work. The tobacco-stripping industry also instituted proceedings, contending that tobacco stripping is part of agricultural processes and that, even if it is not, it is an agricultural enterprise excluded from the provision of the law. The district court of San Juan declared the law to be constitutional but not applicable to homework. Both parties appealed, and the appeal in 1940 was still pending before the Supreme Court of Puerto Rico.

The Fair Labor Standards Act went into effect in October, 1938, prescribing a minimum wage of 25 cents an hour and a 44-hour week, and forbidding oppressive child labor. This act is applicable to Puerto Rico, but does not cover the majority of Island workers, who are engaged either in

agriculture, the processing of agricultural products, or in intra-state commerce.

According to the *Puerto Rico Labor News*, in a report covering 28 important industries for 1937-38, only six of these industries worked full-time during the year. Average earnings in urban districts for males ranged from a high of \$13.00 per week in the printing trades to a low of \$2.52 per week for dock workers. As a rule women received lower wages than men. Agricultural workers averaged lower wages, although 8 of the 28 industries were the main activities in which rural workers find employment. Wages in these industries averaged for males from \$8.13 a week in sugar factories to \$2.37 a week in coffee growing. In only two trades (printers and dock workers) were the average hourly earnings over 25 cents, and in some cases women workers earned an average of 2½ or 3 cents an hour. Lowest wages earned by rural workers were in truck gardening. In this activity, men worked 38.9 hours a week, at an average weekly wage of \$2.26. Women worked 46.7 hours, with a weekly rate of \$1.78, and children worked a full week of 48 hours, receiving \$1.50 per week.

Transportation and Communication

FOR centuries, sailing ships were the only means of transportation and communication between the Islanders and the rest of the world. At one time it seemed as though the colony would be abandoned, for no Spanish ships called for several years. Whenever ships were sighted on the horizon it was an occasion for jubilation, but often the rejoicing turned to fear as the watchers discovered the vessels were sailed by buccaneers or pirates. Majestic Spanish galleons laden with gold from the Aztec and Inca empires touched at Island ports, but for the most part only to take on supplies and water.

As the colony's industry and commerce gradually began to evolve and water traffic increased, the necessity of adequate land transportation became apparent, since there were no navigable streams reaching the rugged mountainous hinterland.

In the early days the Island was thoroughly explored by the *conquistadores* in search of gold. Several modern roads follow, more or less, the Indian trails established long before the mail-clad men arrived. Surveys were made and a plan was worked out for a network of roads to cover the whole territory. A Consultive Council for Trails was created, but because of lack of funds it acted only in an advisory capacity. Puerto Rico was poor and had to depend mostly on funds from Spain, itself an impoverished nation. The plan remained undeveloped until the middle of the nineteenth century. At that time only dirt roads

and trails connected the towns, so that communities existed relatively independent of each other. As a result, coastwise shipping was the only means of transportation. A large number of sailboats engaged in carrying passengers and freight from San Juan to the various island ports, and from there they were transported to inland towns on horseback, or by carriages, mule trains, and ox carts.

On January 29, 1853, *El Borinquense*, the first coastwise steamer giving service to all ports, arrived at Ponce. Today more than fifteen companies operate between Island ports and the United States, South America, Europe, and neighboring islands.

The first definite step taken by the government for the public construction was the establishment in 1854 of the Division of Public Works, under Don Antonio Sánchez Nuñez as director. The first general plan of road construction was not adopted until 1860; it consisted of a main road, to be designated as the Carretera Central, extending in a straight east-west direction from Humacao to Mayagüez; and another circling the Island along the coast, to be known as the Circumvallation Road. These roads were to serve as truck highways for a network of roads that would connect all towns and villages. The plan, however, was not followed. Instead, the Camino Real, a north-south road from San Juan to Ponce was started, as of greater practical use for the movement of troops and for the general development of the Island (*see Tour 1*). By 1898, when the Spaniards turned the Island over to the United States, there were over 276 kilometers (171 miles) of road, which had cost the enormous sum of \$2,560,927.

Immediately following the American occupation about 100 kilometers were constructed hastily for the use of the invading forces. Permanent construction, with the aid of the Puerto Rico Legislature, was pushed continuously, and the Island's network of roads in 1940 totaled 2,316 kilo-

meters (1,438 miles) of modern paved highway, in addition to some 8,000 kilometers of country roads. By this highway system, every section of the Island is easily accessible. With rapidly increasing motor transport traffic, roads are being improved, obstructions removed, and roadsides beautified and landscaped.

One of the most striking developments in the highways of Puerto Rico is the construction of a parkway around the Luquillo National Forest. This scenic road follows a north-south direction along the highest part of the range. The highway is open to traffic, and is generally regarded as the finest scenic parkway in the Island (*see Tour 2B*).

Close upon the expansion of the Island's system of roads came the development of motor and passenger service. The horse-driven conveyance, oxcarts, and other primitive means of transportation have been displaced by 20,000 motor vehicles. More than 70 different bus and truck lines provide passenger and freight service on regular schedules, under the insular public service commission.

The Island railway, for the construction of which the Crown of Spain granted permission to Don Ivo Bosch in 1888, greatly contributed to the rapid expansion of land transportation. By 1898 the railway had passed into the hands of a French concern but in 1920 control was regained by Puerto Ricans. It is now the property of the American Railroad Company, and operates 359 kilometers of narrow-gauge (1 meter) track.

The French-owned line, extending from San Juan, east to Carolina, and west to Ponce, and a smaller one known as the *Línea Férrea del Oeste*, running from Cataño, the little town across the bay from San Juan, to nearby Bayamón, were the only lines operating in 1898 when the American troops arrived. Later other lines were constructed but were soon abandoned, among them a line operated by the Porto Rico Railway Light and Power Company from Río

Piedras to Caguas. At present (1940) there are five private lines, used exclusively for transporting sugar from mills to seaports. The Línea Férrea del Oeste discontinued its railway service, and now operates motor buses over the same route.

In December, 1929, the Pan-American Airway was given a permit to establish an airport at San Juan. This company, linking the Island with the Americas, maintains a tri-weekly schedule for the transportation of passengers, mail, and express. This service brings the Island into close contact with the mainland, making it only 12 hours away from Miami. The year-round summer weather affords ideal flying, and air transportation is fast becoming popular. Some residents have their own planes and private airports. A local company furnishes service within the Island, and the trip from San Juan to Ponce that took three days by coach in colonial days, and now takes three hours by motor, is shortened to fifteen minutes by air.

The Insular Government owns and operates a telegraph and telephone system which, in conjunction with that of the Porto Rico Telephone Company, gives adequate service to the whole Island.

The first telegraph line was built in 1849 by a New Englander for his private use—Samuel F. B. Morse, the inventor of the telegraph. Over a 3-mile line he made experiments at a plantation near Arroyo (*see Tour 2*). In 1869 a telegraph line was established between Arecibo and San Juan. Today Puerto Rico has ample cable and radio communication facilities with service to all parts of the world. Radio-telephone communication may be had to the United States and other parts of the American Continent.

The People

ETHNOLOGISTS believe that the aborigines of the Antilles made their way to the islands from nearby points on the South American Continent.

In the pre-Columbian period the two large Indian tribes of Tupi Galibi stock, the Caribs and the Aruacas, were constantly at war with each other. Finally the Caribs overpowered the Aruacas on the Continent, and forced them to take refuge in the Antilles. A part of the tribe settled in Puerto Rico, or as it was known to the Indians, Boriquén (often Hispanicized to Borinquen).

This was the tribe Columbus found inhabiting the Island on his second voyage to the New World in November, 1493. Ponce de León was struck by the beauty of the Island and the friendliness of the natives. At that time it is estimated the Indians, who were called Boriqueños by the settlers, numbered not more than 60,000.

The Boriqueños were having a hard struggle to hold the Island against attacks of their blood relatives and bitter enemies, the Caribs. This warlike tribe, hunters of man and beast, for they were cannibals, had spread out from their base on the Continent. They had taken over, one by one, the islands of the lesser Antilles to the west and south of Puerto Rico. Perhaps the large island would have been their next conquest. At any rate there is evidence of their frequent landings on the seacoast, their destruction of peaceful Arawak villages, and abduction of women and children to satisfy their carnal and gastronomical appetites.

The coming of the Spaniards undoubtedly saved the Boriqueños from this fate. But the alternative was little better. In 1582 the Spanish Governor of the colony reported that not one Boriqueño remained on the Island.

These Indians were a peace-loving, domestic people, with little or no predatory zeal. They had a well developed social sense, as is evidenced by their political and economic institutions. Their society was based upon the family and the clan, each of which had privileges and obligations within the framework of the tribe. The government was personal and patriarchal. The *cacique*, or chief of each clan, exercised an authority within his clan that went beyond the bounds of political power. His subjects were his children, and to be governed as such. He was the final arbiter of all questions within his province, the leader of the clansmen in battle, and was responsible for the orderliness and safety of his village and the friendliness of its relations with other villages. But he, in turn, acted under the authority of the *cacique* of the largest clan who was the chief of the tribe.

At the time Ponce de León took possession of the Island, Agüeybana, a wise and friendly *cacique*, was chief of the Arawaks. He lived at Guánica, the largest Indian village in Puerto Rico, on the Guayanilla River.

The rank of each *cacique* apparently was established along democratic lines; his importance in the tribe being determined by the size of his clan, rather than its war-making strength. But undoubtedly the priests, as is usual among primitive peoples, had considerable influence in the choice of leaders and determination of policy. There was no aristocracy of lineage, nor were their titles other than those given to individuals to distinguish their services to the clan. However, there were social castes determined by birth, and class distinctions determined by type and quality of service rendered. The three castes were known as the *Mationjeri*, the *Bopari*, and the *Guaopari*.

The *caciques*, in view of the fact that each village or clan had one, may have been numerous enough to constitute a class in themselves. Then came the *nitaynos*, or sub-chiefs, even more numerous, for each *cacique* had a number of lieutenants among whom he delegated his duties: one to lead in hunting; one in fishing, and the like. The *bohiques*, medicine-men or shamans, were a class apart. Judging by the influence religion and magic had upon the people, this class must have been large and powerful. The lowest class in the clan was the *nabori*, or ordinary worker. There was no distinction in the type of work he performed: he might be tilling the soil, making implements, hunting, fishing, or fighting, according to the need of the moment; all tasks were equally respected.

The division of labor and apportioning of its products were matters for the *cacique* to decide. Property was a communal affair. The Boriqueño had only an elemental sense of acquisitiveness; his food and adornment were for the moment, and he made no effort to acquire more than he could use nor tried to save for the future. He was honest, both because his wants were simple and because he had never learned the value of dishonesty. Even after the Spaniards came to exploit him, to enslave his people and plunder his Island in their ruthless search for treasure, he continued to lack acquisitiveness. The early settlers needed neither doors nor locks to protect their property; their gold, clothing, and other possessions were never touched.

The Boriqueños gave a distinguishing name to each of their villages, but they were all laid out on the same general plan. Two main streets intersected in a public square called the *batey*. The *cacique's* house, the *bohío*, stood in the center of the village facing the *batey*. It had the distinction of being rectangular, whereas all other houses were round, and of having a shaded porch fronting on the public square. The houses were constructed of palm leaves and

mud, similar to the *bohíos*, or thatched huts, of today. Smaller alleys branched off the main streets along which the houses were crowded. Village activities centered in the *batey*. All types of meetings, games, dances, and martial exercises were held in front of the *cacique's* porch.

It is doubtful if the *batey* was used for religious rites. These were held, it is thought, in sacred places remote from the village where they were completely under the control of *shamans*; they were shrouded in mystery and accessible only to the initiate. In various places throughout the Antilles and particularly in Puerto Rico are found level spaces enclosed by rings of stones, apparently the remains of seats. Tumuli, mounds of earth used for the burial of the dead, are often located a short distance outside the enclosures. The present day natives call these fields *Juegos de Bola* or *Cercados de los Indios*. They may, it is true, have been used for ball games, but it seems far more probable that they were reserved for the celebration of solemn religious ceremonies.

The Boriqueños had difficulty distinguishing between life and death. They had no concept of the soul, nor had they developed the idea of immortality in a region different from the world of their daily lives. For them this life did not end with death. After a brief interlude the deceased person, now called a *jupia*, retired to a secluded part of the Island called the *coaibay*. There he stayed quiescent during the day. At night, however, he wandered afield, eating wild fruits and often getting in touch with his living neighbors. The *jupias* were themselves mortal, but just what further *coaibay* they retired to on their next death was never developed, nor did their movements in any way bring them closer to the tribal gods. The living, in fact, were presumed to know as much of the gods as did the *jupias*. Thus, the mystery of death played no part in their religion.

Moral sanctions, however, were enforced through their

conception of the power of the gods. The Boriqueños worshipped the spirit of good but gave no thought to reward and punishment in the next world; rather their favor or disfavor in the eyes of the gods won them mundane benefits.

Guquyivi, the spirit of good, was the chief dispenser of benefits. He protected the lives of the Indians, their fields, and their homes in the mountains. *Jurakán*, the spirit of evil, caused death and destruction. Other personifications of this mythological dualism were the gods *Zemi* and *Maboya*. *Zemi*, a god of both sexes, was devoted to the home and was symbolized by a potent amulet accompanying the Indian to his grave. *Maboya*, on the other hand, was a nocturnal deity who destroyed the crops and was feared by all the natives, to the extent that elaborate sacrifices were offered to placate him.

The *bohique's* functions extended beyond the sphere of religion. He was physician to the clan, treating, often curing, with witchcraft or with practical remedies. He was responsible for the continuation of tribal culture. He supervised the education of the children and preserved by word of mouth the stories of the past, the myths and traditions of the tribe. It was also his duty to prepare the youths who were to succeed him in the art of witchcraft and medicine.

Music was a vital element in the tribe's culture and was introduced into all its activities. Music among the Boriqueños was a well developed art in comparison to that usually found among primitive peoples. The *boriqueña*, a tribal song, was a monotonous recitative with irregular interpolations of off-key intervals. It was accompanied by the rhythmical tones of the wooden tabor, the *maguety*, and of gourd rattles called *maracas*. The latter are still used by Puerto Rican natives to accent rhythm. A form of pageantry and dance was consistently woven in and out of the music, the whole resembling a modern operatic produc-

tion. The performances were usually based upon historical or religious themes. It is believed that some of this prehistoric music survives in the Negro dance, called the *bomba*, common to the Antilles, the refrain of which goes:

Aye bomba ya bombai
La massana Anacaona.

At the time of Columbus' discovery the Boriqueños had passed through the nomadic hunting and fishing stage and had become attached to the soil. They had always been fishermen rather than hunters, for there were few wild animals on the islands, but an abundance of fish in the surrounding waters. Moreover, their gentle and nonpredatory nature was adaptable to domestic life, and they made excellent farmers. Cultivating the soil was called *kunuku* and to them farming was as honorable an occupation as war-making. With their simple primitive implements, favored of course by an ideal climate and soil, they developed a relatively advanced type of farming. They planted cassava, garlic, and potatoes, but their chief crop was the *yucubia*, which could be pulverized to a nourishing flour. White cassava, known as *xau-xau*, was made from the *yucubia*; a starch called *anaíboa*, much used in cooking, and a vinegar were extracted from the same plant. Another product of the *yucubia* was a beverage made by fermenting the cassava. Indian corn or maize was also cultivated, and from it they concocted a popular drink.

Among the vegetables and fruits cultivated were *yautía*, *mamey*, *guava*, *anón*, all of which are still known by their original names. Three non-nourishing plants were also extensively cultivated, the *ají* (chili), the *cojiba* (tobacco), and the *behn* (a purgative).

In spite of the warm climate and generous nature which supplied the simple needs of the Boriqueños, they were not an indolent race. On the contrary, they were notably indus-

trious and had developed a fairly high type of craftsmanship. Hammocks, bracelets, and necklaces were made. Out of the *majagua* and the *maguey* plants cords were drawn to be known as *cabuyas*, a name by which they are still called. The craft of basket weaving was highly developed as well as carving and polishing stones and the making of pottery. Wood believed to be black mahogany was beautifully carved into implements, trays, and idols.

Numerous archeological discoveries testify to the craftsmanship of the Boriqueños. Among them are idols carved out of stone and marble; others modeled in clay, to represent grotesque hybrids, part man and part ape, a snake with a human face, or a distorted frog. Some of the human features have oblique eyes, marking perhaps the Mongolian ancestry of the race. The artifacts found include many necklaces and bands for the arms and ankles. The latter are usually carved out of jasper or serpentine marble and highly polished; the former are of beads of turquoise or marble.)

According to the accounts of their Spanish conquerors, the Boriqueños made use of gold which they found in auriferous sand banks in several parts of the Island. But no specimens of the Indians' use of this metal have been uncovered, nor is there any evidence that they utilized copper and bronze.

Clay offered the Boriqueños their best material, and they became expert and artistic potters. They made all types of earthen vessels, cooking pans and pots, amphorae, small jars in which beads and amulets were kept, and large plates, called *buren*, from which they ate. Many of the vessels were well modeled and embellished with intricate patterns. Amulets, idols, and masks were also modeled in clay.

Unfortunately, but few of the archeological specimens unearthed in Puerto Rico remain on the Island. The collections made by Latimer, Fewkes, Stahl, Newman, Pinart,

and other well-known archeologists are now housed in the Smithsonian Institution in Washington, D. C., or in museums in New York, Paris, London, and other European cities.

The Boriqueño had many wives. This was particularly true of the *cacique*, for he was able to purchase wives through offering dowries of marmoreal bead necklaces, called *colesibi*, and much appreciated by the women. The daughter of a *cacique* or *nitayno* often held out for a larger price. In her case it took gold pieces to lure her into the polygamous household. The simple *nabori*, or workman, led a more restricted conjugal life, for he lacked the means to offer desirable dowries. Often he had to be satisfied with a woman cast off by a *cacique*. This buying of women was found in every settlement. Marriage had no religious character and little romance. Yet it is true that love between the sexes was something more than the mere possession of the female. The first woman in the family was a person of importance. This is evidenced by the fact that a modified form of matriarchy existed under which the son of the *cacique's* sister inherited the chieftainship rather than the *cacique's* own son.

(The Boriqueños were characterized by Columbus as a race "the color of canaries," but bronze may be a better term for the coloration. They were slightly smaller in stature than the Spanish, but very sturdy and active. Their freedom from the great plagues that harassed both the Old and New Worlds was due to a variety of circumstances, some of which were a matter of chance. But their personal habits of cleanliness, their balance of physical activity with a tranquil domestic life, their diversified diet and avoidance of over-indulgence, as well as the healthful environment nature offered them, were in great part responsible for their well-being. Their cleanliness was noted by the Spaniards, who commented upon the constant bathing of the Bori-

queños. Their breech-clouts clothed them sufficiently; other garments were worn only for ceremonial purposes. They painted their skin, partly for adornment, but even more as an effective protection against mosquitoes. Whether or not they were aware of the disease-bearing threat of the mosquito, their avoidance of it was a great lifesaver. They chose healthful sites remote from swamps for their villages. In this they showed a wisdom their conquerors might have followed, for many of the early Spanish settlements were located in the worst possible spots and promptly devastated by yellow fever and malaria.

The Boriqueño's diet ranged far; it included wild fowl, fish, numerous vegetables, cereals, and fruits. The sweet potato was prepared in various ways; with cassava bread it provided the basic starches on their menu. Cooking had become an art; elaborate roasts were served, spiced with chili. Salt was not used. The Boriqueños drank a great deal of water, but from fermented cassava and corn they made a strong alcoholic drink for festive occasions. They ate twice a day, morning and night, and indulged in tobacco after dining.

The skull of the Boriqueño was round, with a slanting forehead; its modeling was probably affected by the practice of compressing the heads of infants. The face was large, the jaw pronounced, the lips were thick, and the eyes large, black, and set well apart. On the whole, the Boriqueño was a pleasing-looking specimen of manhood, with none of the exaggerated distortions often practiced by primitive peoples. The beauty of the Boriqueña was recognized throughout the Antilles. The tales of the early explorers and the reports of Spanish governors give testimony to their attractiveness. Frequently, the Boriqueñas taken to wife by the Spaniards are described as being of astonishing beauty and almost as white as Castillian women.

The language of the Puerto Rico Indians resembled that

of the *Taiman* spoken in Haiti and Cuba, with dialectic variations. In them, of course, were to be found many Carib words derived from the Lesser Antilles. Similar derivatives are frequently heard today in the patois of the Island and among Venezuelan tribes. Many words such as hammock, canoe, tobacco, key (island), have become Anglicised and now follow the English dictionary around the world.

ETHNIC GROUPS

Puerto Rico has been populated by three different ethnic groups: Boriquén Indians, European whites, and African Negroes. Consequently, the native population is composed of whites, Negroes, mulattoes of varying degrees, and *mestizos*, a mixture of Indian, Negro, and European stocks. According to the 1935 census, persons classified as "colored," that is Negroes and persons of mixed white and Negro blood, numbered 23.8 per cent of the total population. A decrease in the number of persons reported as "colored" is probably due not so much to interbreeding as to a change in the concept of the census enumerators. The remark has often been made that on the mainland a drop of Negro blood makes a white man a Negro; while in Puerto Rico a drop of white blood makes a Negro a white man.

During the early years of colonization the aborigines far outnumbered the Europeans who invaded the Island. But with hard labor, wars, epidemics, and emigration to neighboring islands forced upon them by the conquerors, the Boriquén race was almost exterminated. As a result of some of the early Europeans marrying Indian women, certain types with physical characteristics of the Boriqueños can still be seen after several centuries.

The major part of the population is, however, of Spanish stock in varying degree. The early settlers came from the

provinces of Castille and León in Spain, the first families being those of Juan Ponce de León, Pedro Carpintero, and Diego Gómez. Nearly every province of Spain was represented by later immigrations.

Early in the seventeenth century, Puerto Rico was made a military colony and as such was governed entirely by the nobility of the mother country. Consequently, the Island became a haven for *grandees* and *hidalgos* who, like their predecessors, the *conquistadores* of America, found in the New World an outlet for their adventurous spirit. Notwithstanding the efforts of the Cortes de Cádiz in 1812 to establish equality by abolishing the privileges of primogeniture, entailments, and seigniories, the test of nobility was enforced until 1837, when it was finally abolished.

As in most of the other New World colonies, the early colonization of Puerto Rico attracted laborers, artisans, soldiers, and adventurers, together with the good and bad human elements of various European countries. Many Puerto Rican families bearing Portuguese names can trace their genealogy directly to a detachment of Portuguese soldiers sent by Philip II of Spain and Portugal, at the close of the sixteenth century, to the newly constructed castle of San Felipe del Morro at San Juan. Some of those soldiers brought their wives with them while others married in Puerto Rico. Other prominent present-day families bearing non-Spanish names are descended from French, Alsatian, Flemish, and Italian soldiery detailed to Puerto Rico by the Spanish Crown in the eighteenth century.

Until the Spanish War of Succession the nobility was granted certain privileges, including the exclusive right to hold public office and exemption from prison for debt, thereby insuring their social status and preventing union with the nonprivileged or common classes. If a woman of noble birth married a commoner her name was erased from the List of *Hidalgos* (the social register); she lost her

social standing and any children born to her were classed as commoners.

Later, when commoners married into the nobility, their descendants became members of the aristocracy through intermarriage. This applied only to members of the white race, with the exception of the descendants of families of *caciques* who were considered *hidalgos* according to the royal decree of Charles I and Phillip II.

Between 1808 and 1823 immigration from Santo Domingo, South America, Haiti, and Louisiana flourished, bringing many people of the leisure class who intermarried in Puerto Rico. After the Spanish-American War, many American soldiers remained on the Island, married Puerto Rican women and settled principally in the fruit-growing sections in the northern part of the Island.

The Negro population is descended from slave ancestors who were brought to Puerto Rico in 1513 from the Guinea Coast by Flemish, Genoese, Portuguese, Dutch, and English traders. In order to prevent insurrections among the slaves, a royal decree provided that Negro women be brought to the Island. During the sixteenth, seventeenth and eighteenth centuries, large numbers of slaves were imported, primarily to labor on the sugar cane plantations. Today, a majority of the Negroes live in sections where their ancestors labored, comparatively few having migrated to the mountains.

THE JÍBARO

Nearly three-fourths of the population live in rural areas. Many rural dwellers are landless peasants, locally known as *jibaros*. Largely of Spanish stock, still retaining the traditions and customs of provincial Spain, isolated by the lack of roads and communications until after the American occupation, forced by specialized agriculture and unemploy-

ment to a low standard of living, the *jíbaro* has long constituted a serious social problem.

Many Insular agencies are co-operating in an effort to rehabilitate the *jíbaro*. By establishing these landless peasants on small plots of land which they can ultimately acquire as their property, concentration of population in rural and urban slums is avoided, and the *jíbaro* is afforded a chance to raise foodstuffs for his own use. The Insular Departments of Labor and Agriculture and the PRRA have done much toward the resettlement of the *jíbaro* on the land, supplying him with houses, seed, and electricity. The Insular Departments of Education and Health have for many years been engaged in the tremendous task of reducing illiteracy and giving vocational training and hygiene instruction. By means of research at the School of Tropical Medicine and the system of regional clinics operated by the Insular Department of Health, the incidence of disease among the *jíbaros* has been much reduced. (*See Resources and Their Conservation, History, Agriculture, Education.*) As recently as 1931, Dr. José C. Rosario in his monograph, *The Development of the Puerto Rican Jíbaro and His Present Attitude Towards Society* (*see Books About Puerto Rico*), could characterize the *jíbaro* as "barefoot, ignorant and sickly, superstitious, and dreadfully inefficient," and as "the Island's greatest social problem." The recognition of this problem by Insular and Federal agencies, and their efforts to solve it, have already done much to alter this picture.

Architecture

THE first settlers in Puerto Rico, almost exclusively from Mediterranean Spain, brought with them the ancient Spanish style of building which still prevails in the Island. The Moorish and Arab influences so evident in Seville, Cádiz, Almería, and Valencia definitely mark the older structures.

The buildings were constructed of crude rubble composed of local lime, red clay, sand mixed with stone chips, sea shells, and broken sunbaked bricks, which a modern architect or builder would condemn as useless. There are, however, two good reasons for the durability of structures of this type. First, the walls are of great thickness, often as much as six or seven feet. Second, walls and other exposed parts were heavily plastered with lime and mortar, which in most cases received innumerable coats of whitewash. As the years went by, the composition slowly baked into a solid masonry under the tropical sun. In many instances, native hardwood columns and beams of ausubo or moralon were embedded in the masonry walls in the same manner that the structural steel frame is built into a modern skyscraper. Floors and roof decks were built of brick over closely-spaced hardwood joists, and finished with imported tile or marble slabs. Floors of hardwood planks laid directly on the joists were common.

Fine architectural monuments throughout the Island, particularly in San Juan, exhibit the ingenuity of the early builders. They chose a combination of elegance and utility.

The structures possess certain distinctive features both in plan and detail. The plan of an inside court or patio, surrounded by spacious arcaded galleries, is characteristic. In detail the outstanding features are the plain wall surfaces sparsely decorated, tile roofs, wrought iron grilles and balconies, and the Spanish Renaissance decorative motifs on doorways, entablatures, and cornices.

Numerous lovely examples of work done in primitive masonry stand today. La Fortaleza (1533), the Governor's Palace in San Juan, is a gem of architecture, "half palace, half fortress." It combines the harmoniously salient features of Spanish and Moorish architecture. Casa Blanca (1527), also in San Juan, built of solid masonry, is characterized by unadorned simplicity.

El Morro, a huge mass of masonry piled at the entrance of San Juan, was designed by the Spanish engineer Juan de Hell in 1554, who also designed the Morro Castle at Havana. Built to defend the city, its architecture was confined to a simple and utilitarian plan. But the clean lines of its square and angular construction and its balanced form make it a work of great beauty on an imposing scale. The engineering and architectural skill that went into the construction of El Morro would be noteworthy in any age; before the invention of steel and high-powered explosives, the fortress was considered impregnable. This was proved time and again as it resisted assaults of the English, French, Dutch, and buccaneers.

Lacking adequate materials, the art-loving Spaniards were compelled to select simple decorative motifs and to employ them in only one or two parts of the building. This is exemplified in their churches, where all decorative effects were devoted to the main entrance and the dome, while other parts of the building were left in large, plain surfaces. Here, as the result of necessity, a charming and original effect was attained.

The plan of San José Church (1523) in San Juan is simple. The nave is flanked by side aisles, divided into chapels centered on the arches between nave and aisles, which lead up to a north and south transept. With the apse at the farther end of the nave, the main features of its architecture form the cross-shape so common to churches. Both exterior and interior are designed in a plain, early colonial Spanish, but the vault is ribbed with Gothic mouldings starting at the spring line and meeting at the center of the dome in a circular medallion.

Shortly after the founding of San Juan (1521), the Spaniards chose for their next settlement the town of San Germán in the southwestern section of the Island. Here they built the Church and Convent of Porta Coeli. The dust of four centuries has obliterated the convent, but the Church still stands high on a mound at the edge of the town, looking down upon the long narrow plaza. The Church of Porta Coeli (1538), with its tile roof and facade rising to a central bell-cote, follows the general pattern of Spanish chapels: there is the same front entrance flanked by two smaller doors; the same nave with its side aisles and raised altar space or apse, with an arched opening at one side leading to a small sacristy in the rear. Its construction is so quaint and primitive a combination of wood and masonry, and its details so crude, that this might well be the original of its type. The Church of San José, however, antedates it.

The Spanish Mission style, created by the missionary Fathers in Southern California and Mexico, appears occasionally in the Island's religious buildings. The Capilla del Santo Cristo, or Chapel, in San Juan (1753), follows this design closely. Its front elevation consists of a wide arch with a rather low spring and a parapet wall above, with a bell-cote centered on the arch below. The opening in the bell-cote is a small arch, with a heavy iron bar set hori-

zontally, supporting a bell which bears the date 1810, and is not therefore the original one.

The Spanish Renaissance style is much in evidence in many buildings old and new. A rusticated first story, which sometimes is replaced by a plain wall with a slight batter, forms the podium or base on which stand superimposed orders or pilasters two stories high, surrounded by a heavy cornice in the manner of the Italian and Spanish Renaissance. The first story is usually broken by small splayed windows and one large arched doorway which gives access to the patio through a "zaguán," from which opens the stairway, usually circular, leading to the upper floors. The upper floors are characterized by large openings with triangular or segmental pediments, the windows or doors opening into small balconies with graceful iron railings.

The Intendencia Building (1848) in San Juan is the best example of this style. A splendid modern version is the Central High School in Santurce. The main part of the building is adorned with large columns, forming balconies along the front. The stone ornamentation is exquisite. Another modern example is the Customs House (1931) in San Juan, designed by A. B. Nichols. All the ornamentation is in polychrome terra cotta; the roof in Spanish clay tiles. At the University of Puerto Rico in Río Piedras the new buildings in general follow this design. The magnificent home of the School of Tropical Medicine (1926) in San Juan was designed after the Palace of Monterrey in Salamanca, a classic of the Spanish Renaissance.

The popular Spanish-American or Mission style took hold in secular building at the beginning of the twentieth century, and has spread through the Island. Among the best examples are the Psychiatric Hospital in Río Piedras, the Presbyterian Hospital in the Condado suburb of San Juan, and several schools and convents maintained by the Redemptorist Fathers in the larger towns.

Several public buildings and many homes follow mainland styles. Many of the old homes on the south coast, principally in Arroyo, are adaptations of New England cottages, some of them actually built by retired Yankee sea captains. The modern residences are ordinarily built more for durability and comfort than beauty, and are of no particular style although some artistic effects are seen in the colored mosaic panels used for exterior decorations, and in stained-glass windows.

The Insular Capitol at San Juan, built by architects of the Department of the Interior in 1925, is a northern state-house in a tropical setting. The design of the central part of the building is based to some extent on the Library of Columbia University in New York City.

The Casino de Puerto Rico and the Casa de España, the social centers of San Juan, possess beautiful club houses. The former was copied after the Theatre of the Opera in Paris. The Casa de España (1933) was designed by Pedro A. de Castro. It is a replica of a Spanish Cortijo or country estate in Andalucía.

In sharp contrast to the massive, solid structures of the cities are the *bohíos*, or cabins of the country people, constructed in much the same manner as the aboriginal homes of the Indians which the Spaniards found on their arrival. The real *bohío*, raised a few feet from the ground on stilts, is made from palm thatch, with one or at the most two rooms, and sometimes a lean-to kitchen, where cooking is done over a charcoal fire. Furniture is scant and simple, consisting mostly of bed-hammocks, pallets, or perhaps cot beds with *colchonetas* (quilts) thrown over the springs. Usually the interior walls are brightened by gay pictures from illustrated magazines and newspapers. The crude construction of these humble homes is offset by a profusion of flowers and blossoming vines.

More prosperous homes, both in the country and towns,

are typically Spanish, of frame, concrete, or *mampostería* construction, with flat tiled or galvanized zinc roofs, high ceilings, heavy shuttered doors opening or over-hanging balconies, grilled doorways, and tile or mahogany staircases railed with wrought iron.

An example of tropical and Puerto Rican architecture is the oblong house, usually made of wood, and built on a high foundation. Across the front is a narrow balcony. Large, high-ceilinged rooms open off a hall that runs from the front to the back of the house.

Many of the old flat roof *mampostería* houses are but a story high. The entrance door, but one step above the narrow sidewalk, opens directly into the *sala*, or living room. Instead of windows one or two doors with shutters and persienns open on tiny balconies, and the entrance door is also shuttered. And of course there is a patio, often filled with palms and potted plants. These charming old Spanish residences are colored in pastel tints of blue, pink, green, or yellow, contrasting with the dark green of the doors.

Education

THE first known record relating to education in Puerto Rico may be said to be a royal order dated March 20, 1503 to Nicolás de Ovando, Governor General of the West Indies. This decree ordered that a church be built in each settlement, together with an adjoining house where children might assemble twice a day to be taught by the priest to read and write. Ponce de León complied with this royal command when he established Caparra in 1508. Five years later, the King of Spain ordered colonists to provide instruction in the Christian doctrine for the benefit of the Indians. At the same time it was ordered that native boys be taught to read and write and that the sons of *caciques* or chiefs be entrusted to the Franciscan friars for a four-year period of instruction, after which time they were to become the teachers of the Indian population.

The first official notice of a school actually functioning in Puerto Rico is found in a memorial sent to King Phillip II, January 1, 1562. For the first two hundred years, education in the Island was limited to the teaching of Christian doctrine, arts, and grammar. Classes were held in only four towns: San Juan, Arecibo, San Germán and Coamo. In 1782, Friar Iñigo Abbad Lasierra, author of the first history of Puerto Rico, reported a lack of educational facilities, though the first attempt at public education had been made in 1776. In 1799, four women were appointed to instruct classes for girls in San Juan.

The economic and educational renaissance of Puerto Rico began with the nineteenth century. The rural school had its beginning in 1809, when General Messina established a school of agriculture and the manual arts. In 1820, the government adopted a method of instruction, formulated by Francisco Tadeo de Rivera, deputy director of schools in San Juan. At the same time, the influential *Sociedad Económica de Amigos del País*, founded in 1813 by Alejandro Ramírez, first treasurer of Puerto Rico, opened an institute with courses in mathematics, commerce, geography, civil law, philosophy, and drawing, which functioned for many years. In 1825, the cathedral in San Juan established a school offering courses in theology, philosophy, ethics, Latin, civil and canon law, and liturgy. These cultural centers were considered an excellent foundation for a university, which, however, did not materialize.

Rafael Cordero, a poor Negro cigar maker, opened a free primary school for poor children in 1810. Cordero's teaching ability was soon recognized, and the wealthy families of San Juan sent their children to learn under him. Many Puerto Rican intellectuals of the nineteenth century received their primary education in the little school which Cordero maintained for forty-eight years.

A school of 1878 is described in verses by Manuel Fernández Juncos, which may be freely translated as follows:

They gave me a little school, and I swear by my grandmother that the dwelling of a layman has much more the appearance of a school. A dilapidated table (listen, Petra, what furnishings!) a picture of Saint Anne pasted on the wall, a chair with no back, a crucifix, a blackboard with two inscriptions—Carthage and Rome; three ferrules; a whip hanging close to the table—a long thick switch worthy the name of bludgeon; two sheets of white paper, four pens, an old inkwell and an old, lame secretary. In this school where (no joking) I earn thirty dollars a month, I teach letters and—well, after all it is teaching.

In 1851 Governor Juan de la Pezuela founded the Royal Academy of Belles Lettres which was maintained until 1865, when a change of administration caused it to close. This school licensed primary school teachers, formulated school methods, and held literary contests. On February 1, 1856, all municipalities were required by order of the Governor, José Lemery, to make appropriations for rural schools. By 1897 there were 209 of these schools established throughout the Island for rich and poor children.

The advancement of education in Puerto Rico owes much to the library movement begun by the early settlers with what books they brought with them. Institutional libraries have existed in the Island as early as the sixteenth century. The Convento de Santo Domingo (Dominican Friars Community) organized the first library in 1523. One hundred years later Bishop Bernardo Balbuena, poet and author of the *Golden Age*, a pastoral novel, and other works, established a library at the Bishopric. These libraries, together with the archives of the Episcopate, were burned by the Dutch during the siege of San Juan in 1625. Many other valuable works were lost during attacks by the English and French. The Franciscan Friars also maintained a library for over one hundred and seventy-five years, but the books disappeared when the community was dissolved in 1835. These libraries all contained valuable collections of works of art as well as books on literature and theology.

The Economic Society of the Friends of the Country had an endowed library, and when the Academy of Belles Lettres was dissolved in 1865, its excellent library was donated to the Society. By 1884 this library, open to the public, possessed many of the best works of the period. The Society dissolved in 1899, and its valuable collection was distributed between the Puerto Rico Atheneum and the Insular Library.

The first Insular library was established by a royal order

dated June 19, 1831. It was principally a judicial library, located in San Juan. Its former collection is now owned by the Puerto Rico Bar Association.

Public libraries were later established in municipalities of the Island, the first being founded in Mayagüez in 1875. The Municipal library of San Juan was opened on October 16, 1880. Ponce opened its municipal library in 1890 with books of the Reading Cabinet and the private collection of Don Miguel Rosich as a nucleus.

In 1903 the Insular Government established a library in San Juan, with Don Manuel Fernández Juncos, distinguished man of letters, as librarian. Under his guidance the library was operated with modern methods. When the Carnegie Library was opened in July 1916, the Insular Library was dissolved and its collection transferred to the new building.

Today, almost every town and city of consequence in the Island has a library of a sort, not comparable, however, with the libraries familiar to town and village dwellers on the mainland. Some towns have a reading room supported by municipal funds for the benefit of the public. Guayama and Fajardo have municipal school libraries, and the Department of Education maintains similar projects in other towns.

Immediately following the American occupation, the school system underwent a series of modifications. Co-education was provided for, with free schooling for all children between the ages of six and eighteen. The length of the school year was fixed, and an urban system of graded schools inaugurated. Curricula were reorganized and religious instruction in the schools eliminated. The civil institutes and normal schools were closed, and steps taken for the establishment of similar schools in accordance with modern educational methods.

With the establishment of civil government in 1900, the

Department of Education was formed with Dr. M. G. Braumbaugh (later governor of Pennsylvania) the first Commissioner of Education. Schools were patterned after those of the United States. A normal and industrial school was opened in Fajardo and moved to San Juan in 1901. In 1903 this normal school, which was to become the University, was transferred to Río Piedras.

By 1913 the Insular Government had expended fourteen million dollars on education. Six hundred thirty graded (urban), 1,050 rural schools and four high schools had been constructed. At that time there were 1,974 teachers, and school attendance had increased to 162,000. Vocational education offered the pupil courses in agriculture, drawing, manual arts, domestic science, and music.

In 1915, Dr. Paul G. Miller was appointed Commissioner of Education. With him came a change in the method of teaching, which since the American occupation had been entirely in English with Spanish treated as a special subject. Dr. Miller established Spanish as the medium of instruction in the four lower grades, English in the three higher grades, and both English and Spanish for the middle grades. This method was used until November 1934, when Commissioner José Padín ordered that instruction be given in Spanish in all elementary grades with English taught as a special subject from the first grade.

With the appointment of Dr. José M. Gallardo as Commissioner of Education in June 1937, a new school program was adopted with special stress placed on the teaching of English in accordance with the views of President Roosevelt, expressed in a letter addressed to Dr. Gallardo shortly after his appointment: "It is an indispensable part of American policy that the coming generation of American citizens in Puerto Rico grow up with complete facility in the English tongue. It is the language of our nation. Only through the acquisition of this language will Puerto Rican

Americans secure a better understanding of American ideals and principles." Instruction is given in Spanish in the first two grades, with English as a subject; in the third and fourth grades the ratio is two-thirds Spanish and one-third English; in the fifth and sixth grades, half Spanish and half English; while in the seventh and eighth grades, the division is one-third Spanish and two-thirds English. The latter has always been the sole medium of instruction in secondary and higher education, with Spanish being treated as a special subject.

The International Institute of Teachers College, Columbia University, surveying the schools in 1925, reported, "Out of their slender resources (one-sixth of the per capita wealth of continental United States) the people of Puerto Rico have built this monumental establishment from the ground. . . . The history of education in continental United States shows no parallel achievement."

Since 1925 significant progress has been made. The Insular Department of Education has been reorganized for greater economy and efficiency, standards have been materially raised in the administrative, supervisory, and teaching staffs; reorganization has been effected in line with progressive ideas of education and a definite effort has been made toward realizing the social and economic objectives of the educational system.

Approximately one-third of the total government revenue is devoted to education and the support of the schools. The school fund is derived from two sources: the Legislature of Puerto Rico makes an annual allotment, and the municipalities assign a portion of their revenue.

The lack of educational facilities of even the most rudimentary type remains a serious problem. In 1937, with a school population estimated at over 600,000, fewer than 247,000 attended public school, and many of these for only

half of the day. In other words, for every 100 children of school age, only 41 went to school at all.

Puerto Rico has two distinct types of elementary schools—urban and rural. The urban schools are organized on a basis of eight years' elementary and four years' high-school instruction. The curriculum comprises the common school subjects, including manual training, home economics, agriculture, and health and physical education. Spanish and English are regularly included as subjects. The Island had 269 urban elementary schools in 1938, with an enrollment of 114,068.

The organization in rural zones provides for first and second units. The rural first unit organization is planned for the first four years or grades and leads to the second unit, which offers four years of work. In 1937 there were 1,370 rural elementary schools, with an enrollment of 117,119.

The principal purpose of the first unit school is to provide rural children with a primary education and fit them for admission to the second unit schools or further academic work. These second unit schools are pre-vocational, offering courses in pre-vocational agriculture, gardening, industrial arts, handicrafts, trades, and social work.

In 1937 the second unit schools totalled 67, with an enrollment of 11,101. These are consolidated vocational schools that enroll children above the third grade and offer, in addition to the usual academic subjects, instruction in agriculture, home economics, and handicrafts. The purpose of these schools is to raise the standard of living in rural communities and to increase the productive capacity of the land. The academic work includes English and Spanish history, geography, citizenship, nature study, and physical education. Vocational courses for boys include agriculture, tin work, carpentry, shoe repairing, electricity, auto mechanics, and other subjects. For girls, vocational courses

include needlework, basketry, weaving, seed-work, embroidery, lace making, cooking, and other domestic crafts.

Each second unit school has at least five acres of ground for practical work in agriculture, and pupils working on an agricultural project are given one-third of the net proceeds of the crop. The school farm or garden supplies the school lunchroom with vegetables and meats for the table. A subsidiary purpose of the domestic science program is to persuade rural families to adopt a well-balanced diet, based largely on native products.

The agricultural program offers day and evening classes. In the former, instruction in seasonal projects is given to groups of young men who have left school and desire to enter farming. The evening classes are for adult farmers who have started or plan to start certain farm projects which thus constitute the basis of the course. An important feature of the second unit is the social worker who visits the rural homes and gives parents and pupils advice on health, social, and educational matters. The second unit also serves as a social community center. During the evening, a reading room is open for the benefit of pupils and parents, and on Sundays lectures are given for the public in which representatives of the various government departments take part.

The Island had 25 high schools in 1937, with an enrollment of 11,318, not including the one operated by the University of Puerto Rico as the practice school for teachers in training. The secondary schools, like the elementary schools, are undergoing fundamental curriculum changes. Congress on March 3, 1931, extended to Puerto Rico the benefits of the Smith and Hughes Vocational Educational Act, and all supplementary acts. In accordance with this legislation, \$105,000 is appropriated annually for the purpose of co-operating with Puerto Rico in the promotion of vocational agriculture, trade and industrial education, home

economics, and in the training of teachers for these fields. With the extension of the George-Deen law, an additional appropriation of \$254,752 annually is made available for this work. These schools have an enrollment of 7,275 pupils who are taught by 361 teachers.

Trade and industrial education, under the terms of the Vocational Educational Act, is taught in all-day vocational schools of unit type at San Juan, Mayagüez, and Ponce, and eight of the larger towns. Among the trades taught are machine-shop work, electricity, auto mechanics, printing and linotype operation, carpentry, cabinet-making, needlework, radio engineering, and ceramics. As part of the industrial and trade program, a vocational course for household employees is offered to girls.

The Department of Education is engaged in working out a balanced program for physical education whereby every child will take part in some form of activity. Calisthenics, school plays, songs, folklore, handball, volleyball, and basketball are emphasized in the elementary grades. In the high schools, baseball, basketball, and volleyball are popular.

The school lunch, primarily a relief measure, is an important adjunct of the school system. The schools under the Department of Education have developed the school lunch period, not only as a means of feeding needy and hungry children, but also to teach cleanliness, health, courtesy, and table manners. Emphasis is placed on the desirability of a varied diet and the use of vegetables. The lunchroom is usually an open pavilion with built-in tables made by the class in carpentry or manual training. Usually the pupil pays for the meals in service or food, or at the rate of one cent per meal.

School health clubs, agricultural and community clubs, as well as school bands, are conducted much the same as they are on the mainland.

In 1938, there were 53 private schools in the Island accredited by the Department of Education, with an enrollment of 10,862. These schools are usually in large urban centers, San Juan having 20 of them. A majority are parochial, most of them affiliated with the Roman Catholic Church. The courses offered range from kindergarten through college. There were in addition 16 non-accredited private elementary and kindergarten and 7 commercial schools.

Higher education is centered in the University of Puerto Rico at Río Piedras, which, with the exception of the Tropical School of Medicine in San Juan, has placed more emphasis on teaching than on research and publication. The Polytechnic Institute at San Germán offers liberal arts and pre-professional training. The College of the Sacred Heart maintains a School of Liberal Arts.

According to the census of 1935, of the total number of persons of school age (5 to 20), 38.8 per cent had attended school or college at some time during the school year, as compared with only 6.7 per cent in 1899. In 1935, of the population 10 years old or over, 64.9 per cent reported themselves able to read and write. Illiteracy increased in the upper age levels, showing the results of the gradual expansion of school facilities since 1899, and was much more frequent in rural areas.

In spite of the remarkable increase in the percentage of children attending school today as compared with the Spanish era, this increase is in danger of being nullified by the tremendous growth in population. The tragic fact remains that today only about two-fifths of Puerto Rican children of school age have the opportunity of securing an elementary education. This places Puerto Rico in a class by itself among United States Territories, and will remain a present threat to democracy until such time as the American ideal of universal education can be made effective.

Religion

WHEN Christopher Columbus first set foot on Puerto Rican soil, on November 19, 1493, he planted the cross on the western coast of the Island. In 1508, when Ponce de León arrived to colonize the Island, he brought with him priests to minister to the new colony and to teach and baptize the Indians in the Roman Catholic faith. The first church was constructed in 1509, followed by the Convent of Franciscans in 1511.

On August 8, 1511, Pope Julius II created two dioceses in La Española (Santo Domingo and Concepción de la Vega) and a third in the principal city of Puerto Rico, the bishops of which were all suffragans of the archbishopric of Seville. The Canon of Salamanca, Alonso Manso, was appointed bishop of the Puerto Rican diocese and took possession in 1513—the first bishop to arrive in America. The Island at that time had two Spanish settlements with 200 white inhabitants and 500 Christian aborigines.

On various occasions during the first century of the founding of this diocese the Holy See extended the territory until it comprised not only all the Lesser Antilles to the Island of Trinidad, but part of Venezuela between the Amazon and Orinoco Rivers. Fifty-five bishops have governed this ancient See, the cradle of Christianity in America, several of them born in the New World, and one in the city of San Juan—Don Alejo Arizmendi, co-founder of the Conciliar Seminary (see San Juan).

It was on Puerto Rican soil that the first Episcopal con-

secration in America took place; in 1529 Bishop Manso consecrated, in the Cathedral of St. John the Baptist, in San Juan, the bishop-elect of Santo Domingo, Don Sebastián Ramírez de Fuenleal. To this diocese also belongs the honor of being the first bishopric ruled by a bishop born in the new land—Don Rodrigo de Bastidas y Rodríguez de Romera, immediate successor of Alonso Manso.

The first school of advanced studies in the Island was that established by Bishop Alonso Manso on September 26, 1512, even before his arrival in the diocese from Seville. During his episcopate two hospitals were founded: the Concepción in 1524, and San Ildefonso, converted in 1544 into a center of learning.

Because of the increased population, the Holy See in 1924 divided the Island into two dioceses. The southern and western parts were separated and enjoined to the new diocese of Ponce. The diocese of San Juan comprises the northern and eastern sections of the Island of Puerto Rico, the islands of Vieques and Culebra, and the Virgin Islands. Serving the Island are more than two hundred and fifty priests, of which half are secular clergy. The regular clergy is represented by religious orders and congregations from Spain, the United States, and Holland. The Spanish Orders are the Augustinians, the Lazarists of the Congregation of the Missions, the Mercy Fathers, the Carmelitas, the Recollects; the American Orders are the Redemptorists, the Capuchins, the Holy Ghost Fathers, the Servants of the Most Holy Trinity (Trinitarians), and the Marianist Brothers. The Dutch Order is the Dominican.

Orders of nuns consist of those originating in the Island, others from Spain, France, and the United States. French Orders are represented by the Mesdames of the Sacred Heart; Spanish, by the Daughters of Charity of St. Vincent de Paul, the Servants of Mary, the Little Sisters of the Poor, and the Sisters of Mercy; American, by the Domini-

cans, Mission Helpers of the Sacred Heart, Sisters of Nôtre Dame, Sisters of Providence, Franciscans, Augustinians, Daughters of Charity, and Servants of the Most Holy Trinity (Trinitarians). The Carmelita Sisters, with a convent in Santurce, is the oldest native order. With the exception of the last, the orders and congregations have as their fields the schools, hospitals, and asylums; in addition they co-operate actively in mission work, particularly among children and young people.

Among the religious teaching establishments, the most noteworthy are the San José Military Academy at Río Piedras, directed by Fathers and Brothers of the Most Holy Trinity; two colleges of the Sacred Heart, directed by the Mesdames of the same name; the Boys' College of Ponce, directed by the Marianist Brothers; and Academy of the Immaculate Conception, directed by the Daughters of Charity of St. Vincent de Paul.

Among important charitable institutions are the Girls' Orphan Asylum of Río Piedras; the Catholic Dispensary of Ponce; the Old Peoples' Home of Puerta de Tierra; and the College of St. Gabriel for the Deaf and Dumb of Santurce. Prominent in the Social Action movement, or the participation of the laity in religious work, are the Knights of Columbus, Catholic Students' Guild, and the Catholic Daughters of America, who, united with the powerful parochial associations, offer a long-range program of betterment.

Since the change of sovereignty in 1898 all sects and denominations of the United States have come to be represented in Puerto Rico. The first Protestant congregation was that of the Anglicans in Ponce in 1873, when the formation of a republican government in Spain and the issuance of an edict of religious tolerance gave them the opportunity to organize. The ground for their house of worship was donated by the Schuck family on Marina Street, near

Abolition Park, and a church building was brought over in sections from England. The first services were held during the summer of 1873, and the following year the church was consecrated by the Anglican bishop of the British Island Antigua. After the restoration of the monarchy in Spain later in 1873, the status of their church became illegal. The English Government intervened, however, and at length permission was granted the Anglicans to hold services, provided the church bell was not rung.

After the American occupation this congregation was transferred to the jurisdiction of the Protestant Episcopal Church of the United States. The denomination is now represented by 16 churches, two community centers, five day schools, and St. Luke's Memorial Hospital in Ponce, which it supports.

The Federation of the Evangelical Churches of Porto Rico, composed of ten denominations, was formed in 1905, and in 1916 became the Evangelical Union of Porto Rico, consisting of the Baptist, Christian, Congregational, Disciples of Christ, Methodist, Presbyterian, United Brethren, and Union denominations.

The educational institutions connected with the Evangelical Union are the Evangelical Seminary at Río Piedras; the Polytechnic Institute at San Germán; and the Blanche Kellogg Institute at Santurce. Each denomination also conducts its own schools, hospitals, and missions.

Other denominations represented in Puerto Rico are the Christian and Missionary Alliance, Church of Jesus, Lutheran, Seventh Day Adventists, Pentecostal, and Christian Scientists. The Federation of Spiritists, organized in 1903 in Mayagüez, comprised in 1939 more than 150 incorporated societies.

Cultural Life

SPANISH colonization was not altogether a pillaging expedition, nor were the civil and ecclesiastical officials so many gold-hungry looters. A number of them were men with excellent educational and cultural backgrounds. Some were among the leading scientists and scholars of the day; others, themselves men of letters, encouraged the production of literature in the New World.

The first settlers of Puerto Rico, the majority of whom came from the province of Andalucía in Spain, brought with them the Andalusian couplet and the *seguidilla*, from which contemporary popular poetry is patterned. The *décima Jibara* or countryside poetry of today is traceable also to the Andalusian *décima*, a metric combination of ten verses which was introduced into the Island during the sixteenth century.

Coupled with the poetry of Puerto Rico is the name of the Spanish poet Bernardo de Balbuena. Appointed to the Diocese of the Island as Bishop, he occupied this high ecclesiastical office from 1619 to 1627, when he died at San Juan. It was here that he retouched and corrected his famous poem *Bernardo*, in imitation of Ariosto, and wrote its prologue.

Another man of letters was Padre Francisco Ayerra Santamaría, born at San Juan about 1630, and considered the first Puerto Rican poet. His writing was done in Mexico, where he was successful, and his work has been included in many anthologies.

Among the first historians of Puerto Rico in the sixteenth century were Juan García Troche and Antonio de Santa Clara. They wrote a *Memorial and General Description of the Island of Puerto Rico* (1582), containing the first historical outline of the origin of the Puerto Ricans.

During the seventeenth century the historian Padre Diego de Torres Vargas, graduate of the famous University of Salamanca in Spain, wrote a *Description of the Island and City of Puerto Rico*. His book contains a detailed geographic description of the Island, including a survey of all fruits, commerce, mines, churches, and hospitals; notices on the State and the Capital; and an extensive and erudite bibliography.

By far the most outstanding historian of the eighteenth century was Father Iñigo Abbad y Lasierra, who lived on the Island for ten years. In 1788 he published at Madrid his *Historia Geográfica, Civil y Política de Puerto Rico*, an ambitious work comprising a complete history of Puerto Rico from the time of its discovery in 1493 until 1783.)

Oratory was a favored form of expression. In the early centuries of the Island's occupation some of its exponents were Padre Alonso Manso, Puerto Rico's first bishop (1513), Padre Pedro Yando, who delivered a *Funeral Oration* in memory of Phillip V of Spain, and Padre Juan Bautista de Zengotita who, in 1797, delivered a sermon on the occasion of the triumph of the National Militia over the British.

(During the first three hundred years of Spanish rule, however, the intellectual progress of the Island was difficult and slow. Almost the entire population was illiterate, and the schools were so few and so poor as hardly to merit the name. Later, during the revolutionary period (1800-1840), the Spanish Government imposed a strict censorship on the colonies. The importation of books was opposed by the authorities, who believed them to be instruments of

sedition. Puerto Rico was placed under many restrictions, in fear that its people would join the movement for independence then current in Latin America. This fact explains why, prior to 1840, there was very little printed matter in the Island. Intellectuals had to struggle against insurmountable odds, and newspapers lived but for brief periods. The only young men who could hope for education were those whose families could afford to send them to Spain to take university degrees. These young students, prompted perhaps by nostalgia for their native land, began a literary and artistic movement that was later transplanted to Puerto Rico.

The literary movement on the Island began with the introduction of the printing press. In 1812 the first book of poems was printed, and between 1820 and 1823 many literary contributions appeared in the *Investigador*, *El Diario Liberal*, and *El Eco*. In 1832 Bibiana Benítez composed an Ode dedicated to the Royal Territorial Court and a drama, *La Cruz del Morro*, the argument of which is based on the attack on San Juan by the Dutch in 1625. *El Aguinaldo Puertorriqueño* (1843) and *Cancionero de Borinquen* (1846) published collections of prose and verse written by the students in Spain.

In 1851, Governor the Marquis Don Juan de la Pezuela, a poet, founded the Academy of Belles Lettres. This institution contributed greatly to the intellectual and literary progress of the Island.

The revolution of 1868 in Spain, culminating in the dethronement of Isabella II and the establishment of the Spanish Republic, brought temporary freedom of the press and of public discussion to Puerto Rico. It was the dawn of a literary renaissance, marked by tremendous political ferment, in which Puerto Rican writers participated in the struggle for the independence of their own and other Latin-American countries. To this era belongs Eugenio María

de Hostos, perhaps the most powerful mind of Spanish America. He was invited by Santo Domingo to reorganize the school system of that republic, but nine years later he had to leave the country because of his liberal views. Chile then offered him a chair in international law at its National University. His first book, *The Pilgrimage of Bayoán* (1863), is an exposé, written under a veil of fiction, of the restrictions of the Spanish Colonial regime. The book was suppressed by the Spanish Government. He edited a number of magazines and newspapers in Spanish America and the United States, and left behind him some fifty volumes, ranging all the way from nursery rhymes for his children to a national hymn of Puerto Rico, from light one-act comedies to what has been generally recognized as the finest critical essay on *Hamlet* ever written.

[In 1870 Ramón Baldorioty de Castro was elected Puerto Rican Deputy to the Spanish Cortes. He forcefully advocated liberty for the Island. Among his works are a poetical translation of Alfieri's drama *Felipe II*, and the translation of John Stuart Mill's *Liberty*. He edited *El Derecho* (1873) and *La Crónica* (1880), both at Ponce.

Dr. Ramón Emeterio Betances was one of the first champions of Puerto Rican independence. His works *La Viérge de Borinquen* and *Les Voyages de Scaldado*, written in French, and *La Botijuela*, in Spanish, symbolically portrayed the political aspirations of Puerto Rico during this period. Dramatist, poet, translator of Wendell Phillips, abolitionist, revolutionary, defender of the Jews at the time of the worst anti-Semitic feeling in France, this remarkable man was also a practicing physician, and was awarded the highest decoration ever bestowed on a foreigner for his medical work during the cholera epidemic in Paris.

Don Manuel Alonso, author of *El Jibaro*, depicted, in verse and prose, the Puerto Rican customs of the period. José Julián Acosta, author among other books of *Derecho*

Prohibitivo y la Libertad de Comercio en América; Don Julián Blanco, José Pablo Morales, Manuel Corchado, Alejandrina Benítez, Julio Vizcarrondo, Federico Asenjo, and José Gualberto Padilla, were other nineteenth century writers, the last achieving great popularity in a controversy with the famous Spanish poet, Manuel del Palacio, during which the Puerto Rican defended the rights and the prestige of his country with biting satire.

To this group of poets and writers who lived during the Spanish regime in Puerto Rico belongs also Don Salvador Brau, official historian of the Island, the author of *Prehistoric Puerto Rico* and of a splendid work entitled *Spanish Colonization of Puerto Rico*; Don Cayetano Coll y Toste, author of the *Boletín Histórico de Puerto Rico*; Luis Bonafoux, who, though not a native of the Island, became identified with its literature; and Don Alejandro Tapia y Rivera, inspired by Hegel, who devoted himself to almost all branches of literature. The best remembered and best loved of all writers of the later nineteenth century is José Gautier Benítez, whose poems are still recited by the older generation. Gautier Benítez lived at a time in which no literary renewal was possible, and like all other Puerto Rican poets of that period followed the school of Nuñez de Arce.

Many of these writers were educated in Spain, as well as others not mentioned before—Mario Braschi; Francisco Alvarez; Manuel Elzaburu, who founded the Puerto Rico Atheneum; Abelardo Morales Ferrer; Antonio Cortón; José Mercado, author of the splendid poem, *La Lengua Castellana*; Doctor Zeno Gandía, author of the novel *La Charca*; Lola Rodríguez de Tió; Mariano Abril; Dr. Agustín Stahl, author of the botanical treatise *Flora de Puerto Rico*, and others. Living during a period of deep political unrest, many of these writers devoted themselves especially to journalism, and although some collected their

work in book form, many failed to do so. Among these writers was Francisco Gonzalo Marín, author of *El Emisario* and *El Ruiseñor*, who, upon becoming convinced that it was impossible to bring about the independence of Puerto Rico, went to fight for the liberty of another country, and died in the Cuban jungle.

José de Diego, author of *Pomarrosas* and *Cantos de Rebeldía*, and Luis Muñoz Rivera, author of *Tropicales*, may be said to close this era of the Island's literary and intellectual life. Each of these men could have written important lyrical works, if journalism and their devotion to politics had not taken the place of the poet. De Diego embodied his political ideas in a book, *Nuevas Campañas*, and Muñoz Rivera his in a series of books, *Campañas Políticas*.

In the last years of the nineteenth century a group of important writers lived on the Island, some of whom had already begun to write under Spanish rule. Among these were Jesús María Lago, author of *Cofre de Sándalo*; José de Jesús Esteves, whose *Sinfonía Helénica* is a poem of high lyric quality; and J. P. H. Hernández, who not only delighted the critics with the technical excellence of his poetry, but won the hearts of the people as well. For these three, literature was an end in itself and never a means. Hernández' madrigal *A Tus Ojos* is considered one of the best in the Spanish language, often being compared with Cetina's classical madrigal, regarded as the best of all.

(With the Spanish-American War, the modernist movement in literature spread throughout Latin America, effecting a literary revolution which spread even to Spain. Walt Whitman, the apostle of democracy in the United States, and Rubén Darío, the great lyric poet of the South, were the pontiffs of the new literary creed. This type of literature met with such widespread opposition on the part of the romanticists that they increased the volume of their

poetry; but finally they realized that the movement was part of the trend of the times.

Luis Lloréns Torres began to react against the romanticism then characteristic of Puerto Rican literature; José de Diego Padró exploited with great success in his book *La Última Lámpara de los Dioses* the Greek themes, already sung by Rubén Darío, who together with Herrera Reissig had a great influence over de Diego Padró, and the writers of his generation. Others of this group were Antonio Nicolás Blanco, Carlos N. Carreras, author of the drama *Juan Ponce de León*, written in collaboration with the poet José Ramírez Santibañez; Luis Antonio Miranda; Virgilio Dávila, author of *El Pueblito de Antes* and *Aromas del Terruño*, two books which depict the life of the *jíbaro* and are full of a fresh, earthy savor; Evaristo Rivera Chevrement, and Luis Palés Matos. Miguel Meléndez Muñoz is a witty writer in the classical style. He devotes himself chiefly to sociological studies, but has published a novel, *Yuyo* and a book of short stories, *Cuentos del Cedro*.

Of the poets in this group, Lloréns has perhaps the richest lyric vein. In *Voces de la Campana Mayor* Lloréns has gathered all his love verses, but his most forceful poems, such as *Canción de las Antillas* and *Velas Épicas*, have not yet been collected in book form. This poet is best known for his folk-poems in the form of ten-verse lyrical stanzas (*décimas*). In his poems, unusual in expression of ideas and in the creation of poetic images, he has achieved great lyric heights.

Luis Palés Matos has become known on both continents as a writer of Negro poetry, and his poems have been gathered in a volume, *Tum Tum de Pasa y Grifería*. Of this writer Tomás Blanco wrote in 1930, "He has produced a series of poems inspired, not exactly by the Negro population of Puerto Rico, but rather by the exotic Negro of

travelers, missionaries, slavers, explorers, and ethnographers, with an admixture of Haitian royalty, Cuban ñañigos, childhood reminiscences of slave songs, and other West Indian flavorings."

Evaristo Rivera Chevrement is perhaps the least popular of these three poets, but he is a lyric poet of unquestionable merit, some of his best-known poems being *Cristo Rojo*, *Italia*, *Tauro*, *Poemas de la Casa*, and *Poemas del Color*.

Puerto Rico owes the preservation of much of its literature to journalism, as the Island has had few facilities for the printing of books, and writers have often depended on newspapers for the publication of their works. This tradition is still followed, and a great variety of excellent writing is found in the newspapers of today. José de Andino, the first Puerto Rican journalist, flourished after 1757. Manuel Fernández Juncos, one of the leading journalists of Puerto Rico, devoted himself to preserving the literary history of Puerto Rico. Besides writing critical articles, he prepared a valuable anthology of its writers. He is considered the foremost intellectual of the Island in the past three generations. He contended that journalism is the school for prose writers—a school including Luis Muñoz Rivera, Luis Rodríguez Cabrero, Mariano Abril, Nemesio Canales, Juan Braschi, Félix Matos Bernier, and Eugenio Astol.

Previous to 1915 no more than fifteen text books had been published by Puerto Rican authors. The first text book published in the island was the *Catecismo de Doctrina Cristiana*, which appeared during the 1850's written by Bishop Gil Esteve. In 1866 the *Silabario*, written by Julio L. Vizcarrondo, was declared a text book. This was a spelling book relying upon ancient methods of learning to read. The same author published the *Elementos de Historia y Geografía de Puerto Rico* which was made a text book. Among others were *Aritmética Elemental* by Eme-

terio Colón; *Ligeras Nociones de Industria* by Federico Asenjo; *Sistema Métrico* by Pascacio Sancerit; *Elementos de Aritmética* by Julián Monclova; *Silabario* and *Geografía* by Felipe Janer and *Geografía y Gramática* by Ana Roqué de Duprey.

One of the principal objectives of Commissioner Paul G. Miller as head of the Insular Department of Education during the years 1915-1921 was the fostering and preparation for publication of certain text books by Puerto Rican authors. Since 1917, many important text books have been locally written, and a number of them are in use in the island's public schools. One of these is Doctor Miller's own valuable *Historia de Puerto Rico* (see *Books About Puerto Rico*).

Contemporary Puerto Rican writers face a difficult situation, in the most complicated and uncertain era in the history of civilization. Hence the babel of literary voices, among which are heard a few of positive value. Carmen Alicia Cadilla is the author of several books of verse, among which *Silencios Diarios* is outstanding for the purity of its lyricism; Luis Hernández Aquino, one of the founders of the *atalayista* (watch-tower) lyric movement has recently employed a style somewhat more vigorous and full-toned than that of his first years. In his verses, as in those of Felipe Arana, there is always a latent tenderness. Recent verses of Hernández do not show the influence of Juan Ramón Jiménez and Enrique Martínez, his chosen masters, characteristic of his earlier work. René Goldman Trujillo devotes himself to proletarian verse somewhat like that of the North American poet, Langston Hughes. Samuel Lugo, author of *Donde Caen Las Claridades*, is a poet with vigorous characteristics that are beginning to attract attention beyond the Island. He and Joaquín López López, author of *A Plena Lumbre*, José Joaquín Rivera Chevre-mont, Carmelina Vizcarrondo, author of *Pregón en Llamas*,



Architecture



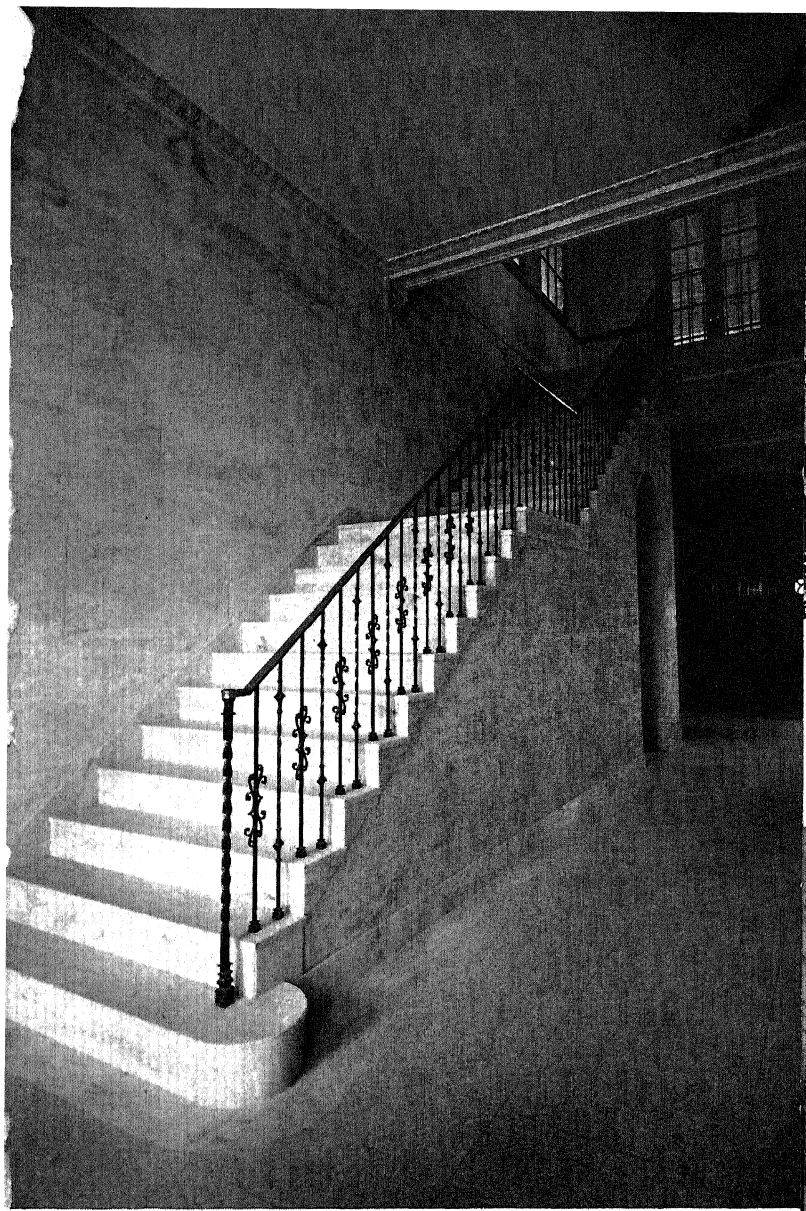


W. L. Highton

CASA DE ESPAÑA, SAN JUAN



P. R. Reconstruction Adm'n.
FAÇADE, MAIN BUILDING, UNIVERSITY OF PUERTO RICO



P. R. Reconstruction Adm'n.

STAIRWAY, MAIN BUILDING, UNIVERSITY OF PUERTO RICO



CAPITOL, SAN JUAN

P. R. Inst. of Tourism

P. R. Inst. of Tourism

CITY HALL, MAYAGÜEZ





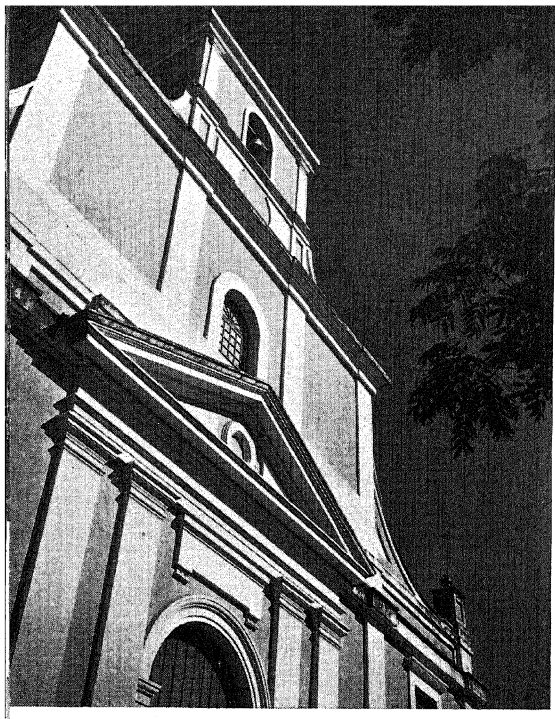
P. R. News Bureau

BANCO POPULAR, SAN JUAN

MODERN SMALL HOME

P. R. News Bureau





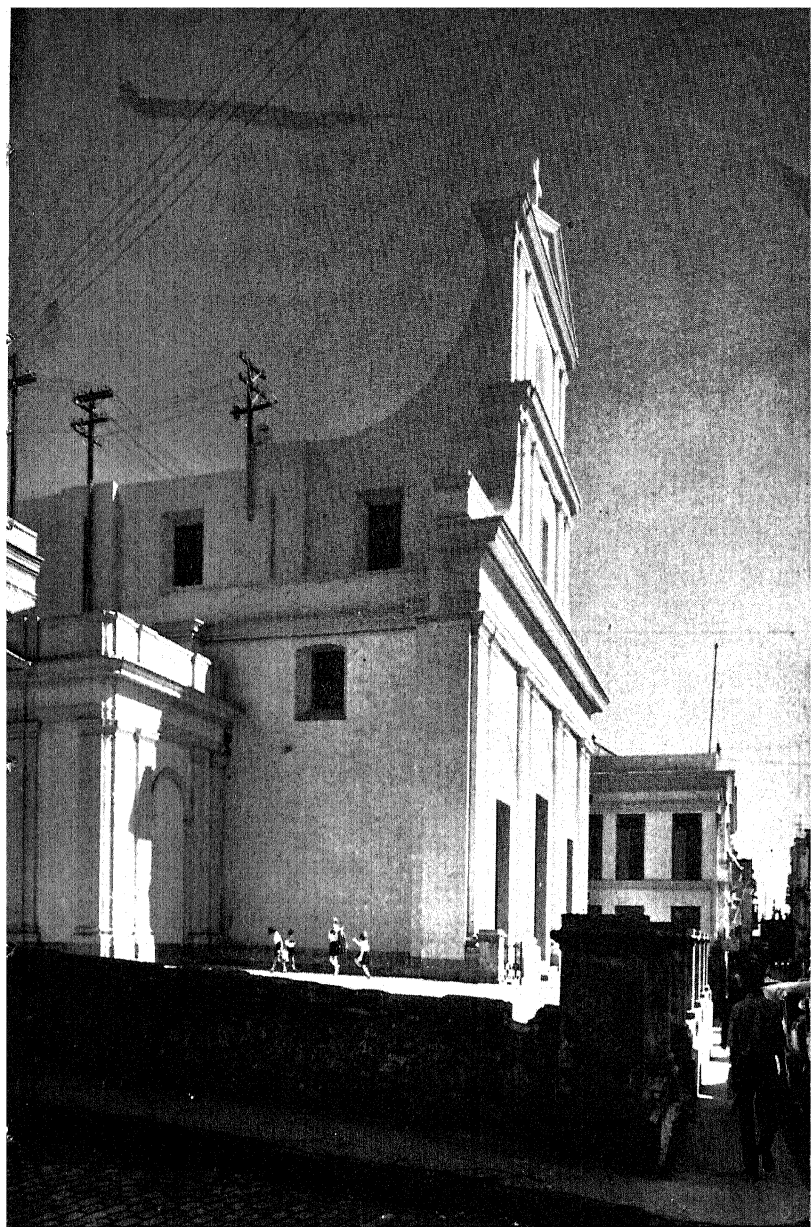
SAN FELIPE
CHURCH,
ARECIBO

W. L. Highton

W. L. Highton

OUR LADY OF MONSERRATE, HORMIGUEROS





W. L. Highton

CATHEDRAL, SAN JUAN



CHURCH, SAN JUAN

W. L. Highton

and Juan Antonio Corretjer, are modernistic poets who have a certain analogy with the Spanish lyricists García Lorca, Alberti and Gerardo Diego. Theirs is poetry of a fragmentary pattern, with light and exquisite flashes, lacking however the evidence of study and discipline necessary if the vein is to be developed and not run the risk of suddenly becoming exhausted. The poetry of Manrique Cabrera, author of *Poemas de mi Tierra*, somewhat resembles that of Goldman Trujillo. His style is more moderate, however, and he shows a greater ambition for dimension, but he occasionally allows himself to be carried away by impulses which rob his work of the accents of his own personality. Altamira Fagot is a poet of strong and daring originality in her erotic lyricism, as is Marta Lomar. Clara Lair in *Arras de Cristal* attempts to give poetic form to love in its most profound sense. Graciani Miranda Archilla, author of *Si de mi Tierra*, is perhaps the strongest and most original of this group, and the possessor of well-defined ideas that lend a touch of sureness to his work. Muna Lee, a continental American living in Puerto Rico and writing in English, gained her high reputation as a poet on the mainland. Trinidad Padilla Sanz signs her writings as *La Hija del Caribe* because her father, a well known poet, made famous the pen name of *El Caribe*. She has made excellent adaptation of the modern poetical forms. She also is a pianist and a writer in prose. One of her outstanding books is *Collar de Lágrimas*.

In the field of criticism, Margot Arce's study of Palés Matos shows a comprehensive and analyzing vision, although perhaps her best study is that dealing with Garcilaso de Vega. José Balseiro and Antonio S. Pedreira, the latter dying at an early age in 1939, have identified themselves with the most progressive tendencies of critical thought, and, not content with encouraging Puerto Rican literature, have greatly helped in making it

better known beyond Insular boundaries. Balseiro excels in scholarly investigation, *Novelistas Españoles Contemporáneos* and the second volume of *El Vigía* being regarded as his best work. In *Insularismo*, Pedreira carried out the delicate task of analyzing the obscure sources of Puerto Rican psychology. *La Novela Indianista* and *Signos de Ibero-América* of Concha Meléndez are important contributions to the literature of criticism. Tomás Blanco, author of *Prontuario Histórico de Puerto Rico*, exerts a strong influence on contemporary literature both by his teaching at the University and his critical essays. In the fields of folklore and popular life and tradition are, among others, *Costumbres de mi Tierra* and *Poesía Popular Puertorriqueña* by María Cadilla de Martínez; *The Folklore of Puerto Rico* by Rafael Ramírez de Arellano; and *The Development of the Puerto Rican Jíbaro and His Present Attitude Towards Society*, by José C. Rosario.

There is a group which follows, in point of time, Balseiro, Pedreira and Tomás Blanco. Its characteristics are less strongly defined, but among many of its members there is a strong interest in political problems, frequently responsible for their remaining silent over long periods. These youths prefer a kind of lyric prose, but often publish newspaper articles and commentaries on contemporary affairs. Belonging to this group are, among others, José Arnaldo Meyners, José A. Roméu, Rechani Agrait, Manuel Rivera Matos, Samuel R. Quiñones, Géigel Polanco, Emilio Belavel, and Noel Lloréns.

Enrique Laguerre is the author of a novel, *La Llamada*, the plot of which is laid in the cane fields. This may be the beginning of a new type of literature for Puerto Rico, in which an attempt is made to plumb the depths where the poor live and to express the problems confronting Puerto Rican workers. As a companion to this novel may be cited another, *Isla Cerrera*, by Manuel Méndez Balles-

ter, who has also written plays such as *El Clamor de los Surcos*. Another successful play is *Esta Noche Juega el Poker* by Fernando Sierra Berdecía.

Among contemporary short-story writers, Angel M. Vilamil has published a collection, *Duelo a Duelo y Otros Cuentos*. Emilio S. Belaval is the author of *Cuentos de la Universidad*, also a collection of short stories. Emilio Huyke and Antonio Cruz y Nieves may be considered their younger literary brethren.

Neither the writers of the past nor the contemporary writers of Puerto Rico have been able to devote themselves exclusively to professional writing. Almost all, except those teaching in the University, have had to earn their living in ways far removed from literature. Writers of the past had to face an indifferent audience, devoting themselves to politics and seeing their work scattered for lack of local publishing houses. Present-day writers also see their efforts dissipated by the same lack of local publishers. The custom whereby an author pays for the printing of his book and then gives away or attempts to sell an edition still obtains in the Island, as yet not penetrated by the belief that the laborer in letters is worthy of his hire. Thus contemporary writers are restricted by the narrow economic circle in which most of them must live. This has forced many to take to journalism, others to depend for their living on a political post. Most of all, Puerto Rican writers feel the lack of local audience—of the enthusiastic circle of readers, however small, to which poets, essayists, and novelists of other countries may address themselves, and from whom they receive understanding and stimulus.

THE THEATER

The earliest available record of any theater activity in Puerto Rico is the construction of the Municipal Theater

in San Juan, in 1824. Many similar buildings throughout the Island have been converted into motion picture houses, and the Municipal Theater, renamed Teatro Tapia in 1938 after the Puerto Rican librettist, now is used for municipal offices. Previously it had been open to traveling troupes, concert artists, opera, amateur, and professional companies. The erection of the Municipal Theater was suggested by Governor Miguel de la Torre in response to a general demand for a cultural center. The building has a seating capacity of 1,200 and is unusual in that its floor may be raised to the level of the stage. During carnival time the Theater used to be a center of festivities as well as an auditorium for public meetings, a concert hall, and a legitimate theater.

Prior to 1896, when the first theatrical company was organized in San Juan, Spanish stock companies from Havana, Venezuela, Colombia, and Mexico had given performances periodically in the Island. Actors like Calvo, Vico, and Roncoroni appeared at the Municipal Theater, sometimes for a whole month, before leaving to give additional performances in the other principal towns and cities.

Due to the generosity of local patrons, operas have been given with varying frequency since the early 1870's. Companies from Spain and Italy, with such great singers as Antonio Paoli, María Barrientos, Titta Ruffo, and Hipólito Lázaro have visited the Island many times. It was at the Municipal Theater that Adelina Patti made her debut in opera when she was barely fourteen years old.

In 1896, Ulises Loubriel formed the first juvenile stock company, many of whose members later made names for themselves on the Spanish-speaking stage. The Spanish society, known as the Gallician Center, organized an amateur company which gave many performances between 1897-98, and its example was followed by the Casino de Puerto Rico and Casa de España. Performances not only in San Juan

but throughout the Island as well have been given by these organizations.

In 1898, a musical-comedy company, the Gira Artística, was formed by the light-opera soprano Europa Dueño, and directed by Maestro Vizcarrondo. The Unión Artística, another musical-comedy company, was formed in 1903. Both companies enjoyed great success, not only in Puerto Rico but in other Latin-American countries. About this time Juan Nadal Santa Coloma, Puerto Rican actor who had been well received in Spain and Latin America, organized the popular Compañía Hermida musical-comedy company.

In the 1880's writers began to turn their attention to the literature of the theater, among them Tapia y Rivera, Brau, Canales, Pérez Lozada, Lloréns, and others whose works have been produced by Spanish, Puerto Rican, and various amateur stock companies. True regional drama has been written by R. Méndez Quiñones and Matías González, in which the *jibaros* have been portrayed. In 1933, a group of Americans organized the Little Theatre, and many performances in English have been given. During the life of the FERA, several theatrical companies were organized under the sponsorship of the Emergency Relief Administration.

The motion picture has largely supplanted the legitimate stage in Puerto Rico, but periodic stage productions still draw large audiences. The pictures shown are those exhibited in the United States, with Spanish sub-titles added, as well as occasional pictures spoken in Spanish and French from the Argentine, Mexico, and Europe.

MUSIC

According to Arístides Chavier, noted Puerto Rican pianist and composer, the liturgical chants of the Roman

Catholic Church formed the basis of folk music in Puerto Rico. Music was thus the first of the arts to be cultivated in the Island. In the course of its evolution, this popular music, influenced by the rhythm of the dance and the cadence of gesture, became the type of folk music that survives in country districts today, serving as a rich source for more sophisticated composers of the nineteenth century.

During the Dutch invasion in 1625, the libraries and archives of the Episcopate and religious communities were destroyed, including all the literature of sacred music in the first century of the colony. But even before, in 1598, Lord George Clifford, Earl of Cumberland, carried away the organ and bells of the Cathedral after looting the city. The reassembling of a music library was begun in 1660, when the Church created the position of organist and choir leader for the Cathedral of San Juan.

Airs from southern Spain and the northern countries of South America influenced the structure of native music, and their fusion with the rudimentary, almost colorless, primitive musical elements of the aborigines marked the beginning of the Island's musical evolution. The *jíbaro* orchestras were the precursors in the interpretation of native music, *música brava*. These troubadour groups traveled from town to town, like the minstrels in Europe. The instruments used were the *triple*, *cuatro*, and *bordonúa*, peculiarly constructed native guitars of high, medium and low pitch respectively; the *güiro*, or *güicharo*, a hollow, bottle-shaped dried gourd, played with a wire fork; and the *maracas*, round gourds filled with small beans or pebbles, shaken to the tempo of the music. These gourd instruments were adopted from the Indians. This *música brava* (daring music) was known in Spain, and described by Cervantes in his composition *La Ilustre Fregona* (Illustrious Dishwasher). Diego de Torres Villarcel in one of his romances written in the village style of the peasants of Salamanca

speaks of *música guapa*: "Masses were held three in a row—daring music with more than a thousand instruments all of rare kind."

Early folk compositions consisted of *coplas* or couplets, *décima*, a song of ten verses, *seis chorreado*, a merry 2/4-time song and dance tune, and *aguinaldos*, or Christmas carols. The present generation has inherited several types of dances with characteristic music. The *seis*, or *seis chorreado*, is danced rapidly and interrupted for the recitation of extemporaneous couplets, giving it a charming originality. The melody is reduced to one or two parts of eight measures, and serves as the theme upon which variations are built. Although the tempo designated on the staff is 2/4, the meter of the accompanying movement is a mixture of triple and double rhythm.

The technical structure of the *jibaro* waltz is distinct from the ballroom waltz, the melodic phrase being short, with few variations. One note of the accompaniment is often substituted by a beat with the hand on the wooden case of the *bordonúa*.

The *areitos*, Indian dance tunes of the Island, appear to have been the aboriginal inspiration for the *plena*, which became modified partly by Negro tunes. The fundamental melody of the *plena* (a dance difficult to classify), as in all regional Puerto Rican music, has a decided Spanish strain; it is marked in the resemblance between the *plena Santa María* and a song composed in the Middle Ages by Alfonso the Wise, King of Spain. The words of the *plena* are usually octosyllabic and assonant. Following the universal custom the theme touches upon all phases of life—romance, politics, and current events—in fact, anything which appeals to the imagination of the people, such as the arrival of a personage, a crime, a bank moratorium, or a hurricane.

Popular dance tunes prior to the nineteenth century were the *garabato*, a variation of the Spanish *jota*; the *cadenas*,

or chains, a musical chorus, like the aboriginal *areitos*; the *mariandá*, a Negro dance of rapid and accentuated time; the *caballo* or horse dance, danced by couples in a whirling manner; the *sonduro*, a form of clog dance; and the *puntillanto*, a form of *zortzico*.

The *upa*, a Cuban dance popularized in 1849, was prohibited by the Puerto Rican Governor, Don Juan de la Pezuela. The *contradanza* (quadrille), which had alternated with the *upa* in social dancing, evolved into the Puerto Rican *danza*, also called during its evolutionary stages the *merengue* and the *baile a dos* (dance for two).

There are two theories concerning the origin of the typically Puerto Rican music of the *danza*. One establishes its close relation with the *caballerezco* from Estremadura in western Spain; the other with a form of tango introduced by Spanish loyalists from Venezuela in 1821. Manuel Tavárez (1843-1883) elevated the *danza* to a high artistic category; and to Julián Andino in 1870 is given credit for its development and typical expression. The melody, serene and sweet in the introduction of the first part, called the *paseo*, is poetic and aloof, with a touch of Spanish dignity. Its second part, generally spirited to the point of crying out in acute crescendo, seems to rebel against the grief of being sad, being poor, and not being free. The *danza* is unique as a musical interpretation, having no relation to the music of other countries in Latin America. Its performance in a conventional manner is relatively meaningless, and to be appreciated it should be heard as performed by native musicians, who change its rhythm and structure according to their temperament or mood.

Through the Economic Society of Friends of the Country, Tavárez was enabled to study in the Conservatory of Paris, where he was acclaimed for his *Gran Fantasía de Concierto*, in which characteristic Puerto Rican airs ap-

peared. Among other compositions that brought him renown is his great triumphal prize march *Benedición*.

Toward the end of the nineteenth century the *danza* was instilled with new harmonic breath and deeper melodic variety and feeling by Juan Morell Campos (1856-1896), who won distinction for his transformation and amplification of this popular music. Morell Campos, with his exceptional endowments and musical genius, naturally succeeded Tavárez. He not only wrote numberless *danzas*, but many instrumental works of merit, including the symphony *Puerto Rico*. For his march *Juegos Florales*, a medal and diploma were awarded him at the Buffalo Exposition.

The beautiful and haunting music of the *danza La Borinqueña*, the Puerto Rican National anthem, was composed by Félix Astol, a Catalanian. Words were set to it by Lola Rodríguez de Tió soon after the Lares Rebellion in 1868. Because of the patriotic sentiment it embodies and the folk memories it evokes, *La Borinqueña* is greatly loved by Puerto Ricans. A military interpretation of it was composed by Luis Miranda (1879) who was appointed bandmaster of the 65th Infantry in 1901. Miranda is the foremost interpreter of the *danza* today, and has written many melodious compositions, such as *Recuerdos de Borinquen*.

From 1763 on, practically all the Spanish regiments stationed in Puerto Rico organized bands and gave concerts in the principal plazas. The Asturian Regiment sent from the mother country proved of great significance to musical art in the colony. Its excellent band entertained the people with the best compositions. The Islanders began to take cognizance of the importance of music in their frugal lives, and soon music societies were founded, and piano teachers were to be found in most of the towns. Arecibo was the first city to establish a music school, followed by San Juan and Ponce.

In 1842 Puerto Rico had a wide reputation as a music-

loving country. Theatrical companies with talented artists appeared for the first time before local audiences. The renaissance of music gained added stimulus from the visits of the singer Adelina Patti and the pianist and composer Louis Gottschalk.

In 1877, with the visits of Italian opera companies and Spanish dramatists, contact between the foreign artists and local talent broadened and stimulated the progress of music and developed the artistic taste of both musicians and the public.

The Spanish music critic Cortijo Alahija deals at length in his work *Música Popular* with the advanced musical art in Puerto Rico during this period. He speaks of the abundant potential musical talent; of the wholehearted support of the public in general; of the innumerable contests, great incentives in themselves to the enrichment of musical culture; and of a select group of native artists who greatly contributed to the musical world.

The orchestra of the Philharmonic Society, maintained by the Salavarría, Montilla, and Travieso families, which lasted until the end of the century, ably interpreted symphonies, musical dramas and chamber music. The native opera *Guarionex*, with words by Alejandro Tapia y Rivera and music by Felipe Gutiérrez Espinosa, was presented by them and a group of enthusiastic amateurs.

Among Puerto Rican musicians and composers, many are worthy of especial mention.

Francisco Cortés, pianist and composer, is best known for his dramatic and descriptive compositions, among which are *Nuit de Noël*, played for the first time in Paris, where he studied, and *Une Fête à Cuba*, an orchestral arrangement. Braulio Dueño Colón's compositions reflect the regional music of the Island. He composed several overtures and an orchestral work, *Ecos de mi Tierra* (Echoes of my Country). His best *danzas* are *Delia y Belén* and *Patria*.

José I. Quintón, pianist and composer, wrote a string quartet, variations on a classical theme of John Hummel, and a Triumphant March. Aristίδes Chavier composed many works for orchestra, band, piano and string instruments. Angel Mislán was born in Barceloneta. He played the clarinet and the bombardino. He was considered by some a virtuoso and certainly did more for music in Puerto Rico by his intense interest and enthusiasm, than almost any other individual. As a composer he is well known for his *danzas Sara Is* and *Tu y Yo*. He wrote a great many other pieces which were never published. As a band musician he was beloved throughout the Island.

In 1898, with the change in sovereignty, all musical endeavours temporarily ceased in the Island. The Spanish Government had subsidized bands, orchestras, and other musical activities, as is customary in European countries. There was no provision under the American Government for such subsidies. In time, laws were passed permitting the various municipalities to subsidize bands, and years later the Insular Government established a system of scholarships for art students.

Then the 65th Infantry Regiment of Puerto Rico established a splendid band, and the Island once more was able to enjoy concerts at the principal plaza in San Juan. The Police Band, reputed one of the best in Spanish America, was dissolved in 1914. From time to time recitals were given by local and itinerant artists, and even symphony orchestras were organized for limited periods of time.

In 1915 the *Club Armónico* was organized at San Juan to give regular Sunday concerts of chamber and symphonic music under the direction of leaders Miranda and Ern. The Philharmonic Society was revived in 1922 with Manuel Tizol as director, but was discontinued the following year. It was not until 1932, however, that with the formation of *Pro Arte Musical*

de Puerto Rico in San Juan an attempt was made to present concerts with regular frequency. Until 1936 membership in the Society was small and the concerts were principally by local talent. Since then, the Society has grown to more than 1,400 members and many world-famous artists have been presented at its concerts. A similar society with 500 members exists in Ponce and another one with 400 members in Mayagüez. Attempts are being made to organize similar societies in other cities of the Island and also to establish a working agreement with other West Indian Islands to form a cultural link. A symphony orchestra on a permanent basis is in process of organization.

Since 1933 the University of Puerto Rico has given great emphasis to the musical department. A promising chorus has been organized under the direction of Augusto Rodríguez and public concerts are given by its members. The Polytechnic Institute has also an excellent chorus. Making up for past indifference, the Insular Government has again created scholarships for Island musicians to study in the United States and Europe. Federal music projects, under the auspices of the Fine Arts Department of the Federal Emergency Relief Administration on the Island, established three bands at San Juan, Ponce and Mayagüez. It was hoped in 1940 that music projects would again be established under the Puerto Rico Work Projects Administration.

Puerto Rico has produced singers and instrumental musicians of a high rank, some attaining international fame, among them Antonio Paoli, world famed tenor, and his sister Amalia, soprano; the pianist Jesús María Sanromá, José and Kachiro Figueroa, violinists who won high honors in Europe; Countess Albani (Olga Hernández), well known in radio and concert; and many others. Among contemporary musicians is Elisa Tavarez Vda. de Storer, a pianist who started her career very early. In the Madrid

Conservatory she won first prize in *solfeggio* and harmony and first and second prizes in piano. She is considered one of the Island's foremost interpreters of Chopin. Rafael Hernández is an exceedingly popular music composer and instrumentalist. Born in Aguadilla, he has written many pieces which are popular throughout Latin America, including *Lamento Borincano*, *Los Carreteros*, and *El Buen Borincano*. His songs include three types: songs of the beauty of his land; songs of social and patriotic sentiment; and songs of the people.

The twentieth century is the epoch when by right Puerto Rico should be one of the foremost countries in the world in musical culture. Sad to say, this is not the case. The folk music raised to such great heights by Tavárez, Heraclio Ramos, Dueño Colón, Quintón, Andino, and especially Morell Campos, is all too frequently supplanted by imported compositions foreign to Latin culture and to the melodic, rhythmic construction and cadence that characterize the *danza*.

PAINTING

Little is known concerning the graphic arts of the aboriginal Indians. Painting was limited to tattooing, probably because of the belief in sympathetic magic. The Boriqueños knew how to boil certain plants and fruits to obtain pigments, and how to use the white of calciums and probably light reds and yellows from baked clay. For a binding medium they used the juice of the *jagua* fruit.

Puerto Rican painting can hardly be said to have existed before José Campeche (1752-1809), the son of a San Juan gilder and decorator. Campeche's career is even more remarkable considering the fact that most of his best work was done without benefit of instruction. It is said that he prepared all his own pigments, extracting color from what-

ever natural sources were available. His skill in making and applying paint is indicated by the brilliant richness of coloring still apparent in some of his work completed one hundred and fifty years ago. Campeche usually painted on wood panels that he carefully prepared. At times he painted on copper, but there is no record that he ever put brush to a canvas. Most of his subjects were religious—saints and madonnas. His style is so characteristic that his paintings are easily identified.

When Don Luis Parat Alcazar, celebrated court painter, was deported from Spain and came to Puerto Rico, Campeche and he became fast friends, Campeche learning much of painting from his friend. Many of Campeche's paintings are to be found not only in Puerto Rico but in Santo Domingo, Cuba, and Venezuela. The titles reveal his favorite themes: *La Caída del Ángel* (The Angel's Fall); *La Concepción o la Reina de los Ángeles* (The Conception, or the Queen of the Angels); *La Virgen de Belén* (The Virgin of Bethlehem). The latter is in the Chapel of Our Lady of Bethlehem, in San José Church, San Juan. Campeche's works show the devout simplicity of a deeply religious nature. Occasionally he painted secular scenes, such as *The British Siege* and *Power's Shipwreck*.

Francisco Oller (1833-1917), born almost a hundred years after Campeche, showed exceptional talent from the age of twelve, and training by Spanish and French masters greatly developed it. Still under the influence which had dominated the earlier school of artists, much of Oller's first work was done for churches and religious orders. As he matured, he gradually turned to landscapes and portraits. In 1851 Oller went to Madrid for further study, and entered the School of Fine Arts of San Fernando, where his master was Don Federico Madrazo, leading painter of the day. After seven years under Madrazo,

Oller went to Paris where he studied with Thomas Couture for three years. Later he studied under Gustave Courbet.

In 1878 Oller held an exhibition in Spain, receiving not only recognition from the public but the decoration of the Cross of Charles III from the King. Many of his pictures were purchased by the Spanish nobility and aristocracy; others were sent to the Paris Salon.

Oller was a realist who did much to modernize the conception of art. His large painting *El Velorio* (The Wake), approximately four by six feet, depicts the mingled mourning and festivities following the death of a *jibaro*. It was first exhibited in Havana, later in Paris, and finally it became the property of Federico Degetau who bequeathed it to the University of Puerto Rico, where it now hangs.

Oller's paintings, particularly his portraits of Manuel de Elzaburu, General Baldrich, Manuel Corchado, and José Gautier Benítez, are lifelike characterizations. Many drawing and painting schools in San Juan were founded at his instigation.

Not at all concerned with the Puerto Rican scene was Adolfo Marín Molinas (1858- date of death unknown), who left the Island in his early teens, never to return. In 1894 he sent his painting *Celos* (Jealousy) to the San Juan exposition, where it won a gold medal. *Extasis* won him another gold medal in Spain, and *Memories of Holland* a prize at Vichy. Facile in brushwork and coloring, conventional in his choice of subject, he was a salon favorite.

Among contemporary artists in Puerto Rico, Manuel Jordán is noted for his paintings of landscapes. Mario Brau is a prominent water-colorist and pen-and-ink artist. Brau attended the School of Fine Arts of San Fernando in Madrid and received instruction from Cecilio Plá and Pellicor. His water colors were exhibited in 1892 at the bi-annual exposition of the *Círculo de Bellas Artes* (Fine Arts

Club) held in Spain. Another Puerto Rican artist is Ramón Frade who studied in Italy and was a pupil of the Dominican painter Desangles. Some of his works are *El Pan Nuestro* (Our Daily Bread), *Reverie*, and *La Inmaculada* (The Immaculate).

Other artists worthy of mention are George Amy, known for his sketches and water colors; Juan M. Ríos, landscape painter; Angel Olivera, caricaturist and designer; Gilberto González Seijo, Arturo Font, Librado Net, and Oscar Colón. Horacio Castaing painted a striking series of portraits of country types.

Among contemporary artists are Miguel Pou, painter of both landscapes and figures; Quero Chiesa, who paints pictures of the *jibaro*; and Rafael Palacios, whose work has received critical attention and recognition in Havana and New York. Palacios' *Noche de San Ciprián* (San Ciprian Night) was exhibited in the National Exhibition of American Art, and is a striking study of *jibaros* cowering in a hut as a hurricane rages. Palacios usually takes his theme from proletarian life. Other contemporaries are J. Rosado, S. N. García González, F. A. Guillermet, José Maduro, Félix Bonilla, Luis Padial, Rafael Ríos Rey, José Rafael Juliá, Gonzalo Fernós, Ramón Frade, Oscar Colón Delgado, Luisa Didonez, and the caricaturists Eolo, C. Filardi, and Tony Villamil. The premature death of Rafael Arroyo Gely robbed the Island of a brilliant watercolorist.

Asked why Puerto Rico, with its brilliance and contrast of color and landscape, should have produced so few painters, the Spanish artist Ignacio Zuloaga once replied, "It is because you do not see enough pictures," adding, "Natural beauty is not enough. Artists learn from contact with art." This was in the early 1920's. Since that time, the Art Department of the University of Puerto Rico under the direction of Walt Dehner has held an important series of art

exhibitions that have done much to encourage young artists. Since 1929 these exhibitions have been annual events—sometimes devoted to Puerto Rican art and history, sometimes to the work of Spanish-American artists, sometimes to graphic artists of North America and Europe. Only eight artists of the Island exhibited in the First Exhibition of Puerto Rican Art and History in 1929, attended by 1,400 visitors. Fifty-nine Island artists exhibited in the First Independent Exhibition of Puerto Rican Art in 1936, attended by 10,000 visitors. This exhibition afforded striking proof of the importance to Puerto Rican artists of these annual shows. The memorial exhibit was devoted to the lyrical watercolors of Arroyo Gely, a talented youth who died at twenty; his work was the direct outcome of the art exhibitions at the University—the only ones he was ever to see. At the Third Exhibition of Puerto Rican Art in 1933, the Bouret gold medal for the best work of a native artist was awarded to Miguel Pou for a group consisting of three nude studies in sanguine and three portraits in oil.

The Federico Degetau collection, bequeathed to the University by the first Resident Commissioner of Puerto Rico in Washington, and including canvases both by Puerto Rican and European artists of the late eighteenth and early nineteenth century, was restored in 1935 by Franz Howanietz, brilliant young Viennese painter and restorer. Funds for this important and difficult task were made available by the Federal Emergency Relief Administration.

Other collections of paintings of interest to visitors are the series of portraits of early bishops in the Bishop's Palace, San Juan, early religious paintings in many of the churches, and the collection of portraits of some of the Island's leading figures, painted by local and foreign artists, in the Puerto Rico Atheneum, San Juan.

The competition in 1939 for a mural in the Mayagüez Post Office, sponsored by the Fine Arts Division of the

United States Treasury Department, was won by José A. Maduro. The climate of Puerto Rico is ideal for fresco, and Puerto Ricans hoped that other buildings would be decorated by Puerto Rican artists. The extension of the Work Projects Administration to Puerto Rico in 1940 also made possible the encouraging of young artists along the lines that have brought such successful results on the mainland.

Interesting sculpture has been accomplished and exhibited by Tomás Ballesteros, Miguel Ferrer Rincón, Miguel Ferrer Otero, and Alberto Vadi.

JOURNALISM

The first printing press in Puerto Rico was imported between 1806 and 1808. Prior to that time news from the outside world came chiefly through Spanish journals received at irregular intervals. Establishment in 1831 of cable communication with other islands of the West Indies and France brought the Island into closer contact with Europe.

La Gaceta de Puerto Rico, generally considered the first newspaper on the Island, was started about 1807 as the official organ of the government and continued for 91 years, throughout the period of Spanish sovereignty. It was not a newspaper in the modern sense, for it published chiefly the decrees, edicts, and records of the government, but throughout its life it was an important source of information of official character.

The Spanish constitution of 1812 extended new rights to the Island, including freedom of press and speech. As a result, in the years immediately following, several newspapers were started which were free to express the prevailing opinion of the time. *El Diario Económico* (1814), was the first of them. *El Cigarrón* (1814), *El Investiga-*

dor (1820), *El Diario Liberal* (1821), and *El Eco* (1822) followed within a decade, the third of these being the first to attempt daily publication. In 1839 *El Boletín Mercantil* was started and continued for 79 years to be an important conservative daily, particularly in the business and political field.

By 1865, eight newspapers were being published, but a law passed in that year required the deposit of a bond of 2,000 pesos from each newspaper as a guarantee against improper publication of information, affecting either individuals or the government. This caused the suspension of most of the Island's newspapers. It was some years before modification of the law aroused new interest in the publishing field, as all publications were constantly under close scrutiny by the government.

Not counting the ones already in existence, 29 new journals (daily and weekly) were published in 1897, 42 in 1898, and 56 in 1899. From the beginning newspapers played a large part in spreading the political ideas and aspirations of individual leaders, and until the past two decades most of them were personal or party organs. Possibly because of this tendency, organizations—political, economic, or cultural—attempt to publish their own organs for propaganda rather than seek an outlet for it in the established press. This has resulted in many publications, most of them short-lived.

La Democracia, founded in 1890 by Luis Muñoz Rivera, and *La Correspondencia*, started the same year, both published in San Juan, are the oldest newspapers still published in Puerto Rico. *La Democracia* was for many years the official organ of the Liberal Party. It began at Ponce; in 1900 it moved to Caguas and in 1904 to San Juan. *La Correspondencia*, an independent, has had continuous publication in San Juan as a daily paper.

Weekly journals and reviews have played as large a part

in making and recording the Island's history as have the daily newspapers. It is to journalism that Puerto Rico owes the preservation of much of its literature. Some of the reviews, pictorial and otherwise, have attained a high degree of excellence, while in specialized and technical fields—particularly medicine and agriculture—Island journals have reported results of original research of importance to the tropical world.

Puerto Rico in 1940 had more than 29 newspapers and other publications well enough established to be generally recognized. Of these, ten are daily newspapers, seven of them published in San Juan. *El Mundo* and *El Imparcial* both publish daily English editions and *La Correspondencia* has an English page. *The Puerto Rico World Journal* is wholly in English. Otherwise Spanish is used exclusively. *El Mundo* and *El Imparcial* lead in circulation throughout the Island. There are approximately a score of weeklies and periodical publications devoted to such specialized fields as business, agriculture, religion, fraternal orders, law, and medicine. (For a list of newspapers and magazines, see *General Information*.)

RADIO

Amateur and wireless telegraphic experiments in Puerto Rico were initiated at San Juan in 1912. The first radio telegraphic station was established in 1920 in the town of Carolina. In 1940 there were 64 licensed amateur radio stations and four broadcasting stations licensed by the Federal Communications Commission, and sustained mainly by commercial programs. Station WKAQ was established at San Juan in 1922 by the Porto Rico Telephone Company. It was operated experimentally for several years before attempting to broadcast definite programs on a fixed schedule. Station WNEL, also in San Juan, began to operate in No-

vember, 1934. Station WRRP is located at Ponce, WPRA in Mayagüez.

These stations broadcast musical and cultural programs, news, and commercial advertising, chiefly in Spanish. Some programs are given in English, such as world news, a daily woman's hour on WKAQ, and a variety hour over WNEL. These programs are heard daily in the other West Indian Islands, and frequently in Venezuela. Listeners in Europe and Honolulu have reported favorable reception of test programs transmitted by WNEL.

The Department of Education conducts a "School of the Air," providing a varied program of instruction and entertainment, using the facilities of the commercial stations for its broadcasts. Simple lessons in English have been included, and at times brief dramatic sketches. The Agricultural Extension Service, supported jointly by the Insular and Federal governments, has a weekly radio hour with a program devoted chiefly to topics of interest to the farmer. Recordings of programs in Spanish which were presented by a member of the staff of the University of Puerto Rico have been sent to the United States to initiate a short-wave re-broadcast, enabling Puerto Rico to participate in inter-American broadcasting.

Since 1935 the Radio Laboratory of the University of Puerto Rico has conducted scientific studies of radio transmission and static in Puerto Rico which have been reported in numerous scientific articles presented by Dr. G. W. Kenrick, Professor of Physics of the University of Puerto Rico, in collaboration with his co-workers. This program has included the study of the relationship between the origin of static and the motion of storm disturbances such as hurricanes. It was the object of this investigation to determine the feasibility of tracing the motion of these disturbances by means of this associated static, a development of great importance to the Weather Bureau as a supplementary

predictional method. These experiments have been supported by a project under the Puerto Rico Reconstruction Administration, and a report of progress was published by Dr. Kenrick in 1938, in the *Transactions of the American Geophysical Union*, under the auspices of the National Research Council (section of Meteorology).

Sports and Recreation

ORGANIZED recreation and sports were almost unknown to the early colonizers, who lived in a state of constant fear of attack from hostile Carib Indians and roving buccaneers. It was not until the nineteenth century, when a new and prosperous era of agriculture and trade was ushered in, that sports came to play an important part in the life of the Island.

Horse racing was one of the first sports organized in Puerto Rico. It soon became a favorite one, and horses for breeding purposes were imported from Spain. The first races of which any records exist were *Las Carreras de San Juan* which took place about 1707 on Cristo Street in San Juan during the festival season. People became so frenzied over this sport that Governor Pezuela abolished it in 1849; in 1853, however, it was re-established. Today, the size and excitement of the crowds at the races indicate that interest in horse racing continues unabated.

Cockfighting is the oldest and most typical Puerto Rican sport. It has been abolished and reinstated a number of times since it was first introduced in the Island during colonial years. Today this sport is at the height of its popularity. There have been times when no town in the Island was without a cockpit. The finely bred English cock is a good fighter:

We will fight together like two English cocks, until we have lost our wings, and are stripped of our feathers and crest.

So wrote the Puerto Rican poet, José G. Padilla, to the Spanish bard, Manuel del Palacio, in his patriotic polemic in 1873.

After 1898 sports generally played in the United States were imported. Among them baseball became the most popular. Basketball, however, is the ideal game for the agile Puerto Rican youth; in track and field events they also do well, and have distinguished themselves at the Central American Olympics. Boxing has a large following, and for several years Sixto Escobar held the world's bantam-weight championship, regaining it in 1939. Pedro Montañez, another native son, is a contender for the light-weight crown. Many stadiums and clubs have sprung up since the sport was legalized in 1927. Matches are held occasionally, at no definite season. Efforts have been made to introduce football, with little success, as the summer weather prevailing the year round does not lend itself to the sport. Soccer is gaining popularity. Tennis is a great favorite, and golf is played 12 months in the year. Other sports and games well-known in continental United States find expression in Puerto Rico—handball, rifle shooting, archery, ping pong, squash racquets, and badminton.

Puerto Rico's deep-sea fishing is unsurpassed anywhere. Barracuda, man-eating sharks, and huge tuna afford endless thrills.

The Island's lagoons and extensive marshlands are suitable for hunting. A variety of water game, such as Wilson snipe, famous for its delicious meat, is found in abundance. This game annually migrates to the Island from North America. Mountain hunting is limited and offers only such spoils as quail and Turkish doves.

Swimming is extremely popular, for both the Atlantic and Caribbean are within easy reach of the majority of the inhabitants. Many people throughout the Island indulge in competitive swimming and diving, and surf bathing is a

delightful sport. Numerous rivers have favorite "swimming holes" for the country people.

Woodland mountain trails through tropical timber, fern, and *sierra* palm trees invite hikers. The mountain trails of the Caribbean National Forest are extremely rough and picturesque, especially the Luquillo unit. Sparkling mountain streams tumble over the mountain sides, and great trees spread their immense crowns hung with vines. Every trunk, bough, or limb supports its fringe of jungle epiphytes (*see Tour 2B*).

The protected harbors and prevailing winds encourage yachting and sailing. Annual regattas are held, and frequent interclub races give the sport a prominent place on the calendar.

Horse-back riding enthusiasts can follow almost numberless trails over the steep mountains, wide-sweeping meadows, or along sandy beaches. Moonlight horse-back riding has become popular. (For opportunities for sports-loving visitors, *see General Information*.)

Wholesome recreation among Puerto Ricans in rural areas is promoted by the second unit schools and the community centers of the P.R.R.A. Athletics and other leisure-time activities have been introduced in country districts. The rural electrification program has helped in the development of recreational activities in the evening, and in more widespread use of the radio.



PART II

Principal Cities



San Juan

Street Names: Although some of the streets have been given new names, the old ones are more generally used:

<i>Old</i>	<i>New</i>
Beneficencia	Dr. Goenaga
Carretera Nueva	Fernández Juncos
Carretera Vieja	Ponce de León
Cruz	Dr. Betances
Fortaleza	Allen
Luna	Rafael Cordero
Malecón	General Pershing
Nereidas	Dr. Ashford
Recinto Sur	Ramón Power
San Francisco	Salvador Brau
San José	José Celso Barbosa
San Justo	José de Jesús Tizol
Sol	General Contreras
Tanca	Federico Degetau

Railroad Station: Comercio and Foch Sts., San Juan; Tras Talleres Station, Stop 15, Santurce (American Railroad Co.).

Local Busses: Fare 5 cents in city limits; pay as you leave.

Interurban Bus Lines: *San Juan to Ponce*, via Aibonito and via Guayama; Blue Line, 45 Recinto Sur; Atlas Line and Lugo Line, 21 Recinto Sur. *San Juan to Mayagüez:* Agrait & Escabí Line, 8 San Justo St.; Línea Nueva, 15 San Justo St. *San Juan to Arecibo:* Línea Matilde, San José St. in front of Cathedral. *San Juan to Comerío:* Línea Romero, El Bosque, La Marina, west of Post Office. *San Juan to Barranquitas, Orocovi:* Línea Flecha Vengadora, El Bosque, La Marina. *San Juan to Fajardo,*

- Humacao:* Línea Borinquen, San José St. in front of Cathedral. *San Juan to Caguas:* Caguas Bus Line, Plaza Principal.
- Streetcars:* Fare 5 cents; pay as you leave.
- Streetcar and Bus Stops:* Streetcars and busses stop every one or two blocks, at a numbered point or "stop." These stops frequently supplement street addresses, and serve to locate a given address within a small area.
- Airport:* Isla Grande Airport, 3 m. from city; Pan-American Airways; taxi fare 75 cents; time 15 minutes.
- Taxis:* 15 cents first $\frac{1}{4}$ mile, and 5 cents each additional $\frac{1}{4}$ mile, regardless of number of passengers.
- Piers:* *Porto Rico Line*, Malecón and Tanca Sts., Pier 1.
Bull Line, Malecón Stop $2\frac{1}{2}$, Pier 3.
Red D Line, Malecón Stop $2\frac{1}{2}$, Pier 5.
McCormic Steamship Co., Malecón Stop $2\frac{1}{2}$, Pier 5.
Lykes Bros. Steamship Co., Inc., Malecón Stop $2\frac{1}{2}$ (see General Information).
- Ferry:* Townsend Square, La Marina; fare to Cataño, across the bay, 5 cents.
- Traffic Regulations:* (See General Information.)
- Accommodations:* Hotels, boarding houses, and furnished apartments at moderate prices.
- Information Service:* Tourist Bureau, Townsend Square, La Marina.
- Theaters and Motion Picture Houses:* Municipal Theater, local productions and international road shows; 20-odd motion picture houses.
- Athletic Field:* Sixto Escobar Baseball Park, Stop 8, beyond Muñoz Rivera Park.
- Swimming:* Public beaches: Escambrón, Stop 8; Condado, Stop 47; Isla Verde, Carolina Road (see General Information). Club swimming pools: YMCA, Stop 1; Casa de España, Stop 2; Union Club, Stop 10; Condado Hotel, Stop 47; Country Club, Stop 46.

- Golf:* El Morro Links, United States Military Reservation, Fort El Morro. Green Fees 50 cents, when accompanied by Club member.
- Horseback Riding:* Santurce Riding Club, Loíza St.; along the beach at Isla Verde.
- Annual Events:* Carnival (date varies), features are parades, dances, pageants; June 24th, Festival of St. John the Baptist (Patron Saint); yacht races, baseball, at intervals. (*See Calendar of Events.*)

SAN JUAN (57 alt., 169,255 pop.), the capital and metropolis of the Island, was founded in 1521 when Caparra, the original settlement, was transferred to the present site of the city. The town was named Puerto Rico (Sp. rich port) by Ponce de León, because of the excellence and beauty of its harbor, when he anchored here in 1508. In time the name of the Island, San Juan Bautista, was interchanged with Puerto Rico, and the city became known as San Juan and the Island as Puerto Rico. The city's early history is similar to that of other settlements in the New World—a succession of hardships incidental to establishing homes in a strange and wild country and to defending property and lives against almost constant attacks of Indians and foreign powers. The city's history is associated first with aborigine and *conquistador*, then with the British, French and Dutch, and finally with the North Americans. Its ancient forts, buildings, churches, and monuments testify to a glamorous past; today it is also the most important commercial city, next to Havana, in the West Indies.

Before the arrival of the *Mayflower* at Cape Cod, the citizens of San Juan had built stone houses, started the construction of fortifications, and were making preparations to celebrate the 100th anniversary of the founding of their city. By 1529 there were 120 houses, the Cathedral had been built, and the Dominican Convent was under construction. With the advent of the seventeenth century San Juan

Manuel de Elzaburu y Vizcarrondo, founder of the Puerto Rican Atheneum; and José Julián Acosta, writer and statesman, several times Insular Deputy to the Spanish Cortes. Their achievements are reflected in the intellectual tradition of the city today, with its many cultural centers, conferences, lectures, and artistic events held during the year.

From the beginning of the colonization of the Island the strategic location and potentialities of San Juan were obvious. The city proper is situated on an islet on the northeastern coast, two and one-half miles long by one-half mile wide, terminating on the western end in a steep bluff 100 feet high, where the Morro Castle Fort guards the entrance of the harbor. It is connected to the mainland by three bridges leading to Santurce.

On entering the harbor, the ship passes the forbidding walls of El Morro, the tiny fort of Cañuelo, the gleaming white walls of Casa Blanca set high on a hill, the castlelike Fortaleza with its eternally green gardens, and the many-tinted pink, green, white, and yellow flat-roofed buildings. Save for a few modern office buildings, the city proper is today not unlike its appearance in 1845, recorded by Don Pedro Tomás Córdova. "From the harbor the city seems as if set in an amphitheatre, and the conglomeration of houses, buildings, and city walls give on the whole a pleasant and imposing aspect. Magnificent fortifications tower over the buildings as if defying the observer. The houses are of stone and brick, of good construction, the majority two-story and on a level with the street, having roof terraces like the ones in Cádiz."

Opening off the narrow streets are wrought-iron doorways through which may be seen arched corridors leading to sunlit patios. The crowded thoroughfares are enlivened by fascinating small shops, large stores, cafes, and street vendors. Ancient pastel-tinted houses with overhanging

decorative balconies and grilled windows rub shoulders with modern office and bank buildings.

Huddled close to the city proper are the slums known as La Perla, a squatters' settlement just below the Morro Castle grounds at the very edge of the ocean and Puerta de Tierra, part of which is land reclaimed from the bay; all of these slums are conglomerations of hastily constructed shacks or crumbling tenements. Here live the poor, earning their living as they can—men at the docks, women in domestic work, needlework, or tobacco stripping.

Across the San Antonio Channel that connects the Atlantic with San Juan Bay, is Santurce, a residential section. With its fine homes embowered in palm trees, flowers, and tropical shrubs, its clubs, hotels, and apartment houses, Santurce compares favorably with the most attractive suburban areas of any American city. Here are the homes of more than half the population of the capital city. Miramar, Condado, Loíza, Martín Peña, and Sunoco are subdivisions of Santurce.

Santurce was originally settled by fugitive Negro slaves from the Lesser Antilles. In 1664 three escaped Negroes and a white man from the island of Saint Croix arrived at San Juan. Governor Don Juan de Guzmán forbade their sale, asserting, "It does not seem fitting for the King to reduce to slavery people who seek his protection." In 1693 His Majesty decreed the freedom of all fugitives from the British and Dutch colonies who sought refuge in the Spanish dominions on condition that they embrace the Roman Catholic faith.

By 1714 there were 80 runaway slaves in San Juan. Governor Don Juan de Rivera granted them a tract of land just outside the city walls in the section known today as Puerta de Tierra, allowing each male refugee two acres for cultivation. The soil was poor, and the exuberant green of large groves of palms and pastures sparkling in the sun-

shine south of the San Antonio Bridge brought visions of the promised land to these unfortunates. The place was called Congrejos because of its numerous land crabs, and there the government permitted these Negroes to settle, up to the vicinity of San Mateo Church near Martín Peña channel. Along the steep hill leading up to the church Santurce had its humble beginning. The refugees organized an auxiliary militia Negro regiment, *Los Morenos de Cangrejos*, and distinguished themselves in protecting the Bay of Cangrejos, now Condado Bay, from invaders. They gave a good account of themselves against the armies of Abercrombie and Harvey in 1797 (*see History*).

Old San Juan still retains much of its colonial aspect. The architecture is Spanish with some adaptations to suit the tropical climate, principally the heat-proof massive walls, shutters, high ceilings, and immense doors. Except for the installation of electric lights, many of the streets have changed but little, especially in the upper part of the city, from the days when chivalrous *caballeros* and beautiful *señoras* passed along them on their way to San Juan Gate to witness the military pageant of welcome to a new governor. Two cultures, Latin and North American, meet and surprisingly blend, and Spanish phrases of courtesy are startlingly mingled with such expressions as "O.K." and "all right."

Ever since its foundation, San Juan has been the center of the governmental, intellectual, commercial, and financial activities of the Island. It has kept pace with the times, and today has seven daily newspapers, excellent educational institutions, many civic and social clubs, thirty-odd churches, modern theatres, amusement resorts, and an efficient means of communication with the interior of the Island and the world. The waterfront at La Marina is the scene of continual traffic; ships often anchor in the wide bay; to the north busses and trolleys run through the ancient city;

through fields of vivid green, roads run east alongside the Luquillo Mountain range; and a ferry crosses the bay to the palm-lined, picturesque little town of Cataño, from which highways lead to the interior and northwestern sections of the Island.

In spite of its metropolitan air, San Juan still retains the provincial charm of centuries ago. Vendors—their wares including everything from notions to fruits, vegetables, eggs, and chickens, carried in baskets perched precariously on their heads, or in small push carts—musically proclaim the virtues of their merchandise; the ice-cream vendor plays a tune on a triangle, the scissors-grinder attracts attention with a whistle. Lottery-ticket sellers swarm the streets, each one assuring pedestrians that *his* tickets surely will be the winners.

The narrow, crowded streets of the old city, with their one-way traffic, make sight-seeing by car rather difficult. Moreover, many small alleys and staired streets, bits of Spain in a tropical setting, can be reached only on foot.

POINTS OF INTEREST

FOOT TOUR 1—2.2 m.

Townsend Square, W. into Depósito St.

1. **FEDERAL BUILDING** (*open daily 8-6*), faces Townsend Square and commands a view of the harbor. The original three-story brownstone building, the first Federally-built edifice in Puerto Rico, was opened in 1913. In 1940 a five-story addition constructed of reinforced concrete was placed on the harbor side. It is occupied by the U. S. Post Office, U. S. District Court, Immigration Service, Hurricane Relief Commission, Federal Internal Revenue Bureau, and the U. S. Steamboat Inspection Service.

2. **UNITED STATES CUSTOMHOUSE** (*open daily*), SW. corner Depósito St., was erected in 1931 from a

design by A. B. Nichols, and is called the most beautiful customhouse in America. It is a reinforced concrete structure with a heavily ornamented polychrome terra-cotta central motif and plain rose-colored walls topped by a clay tile roof in the Spanish Renaissance style. The ground floor is entirely devoted to storage rooms, and offices occupy the second floor. Two interior courtyards surrounded by arcaded galleries furnish light and cross ventilation to both floors and provide a beautiful setting for lily pools, potted palms, and vari-colored tropical plants.

L. from Depósito St. to foot of Arsenal St.

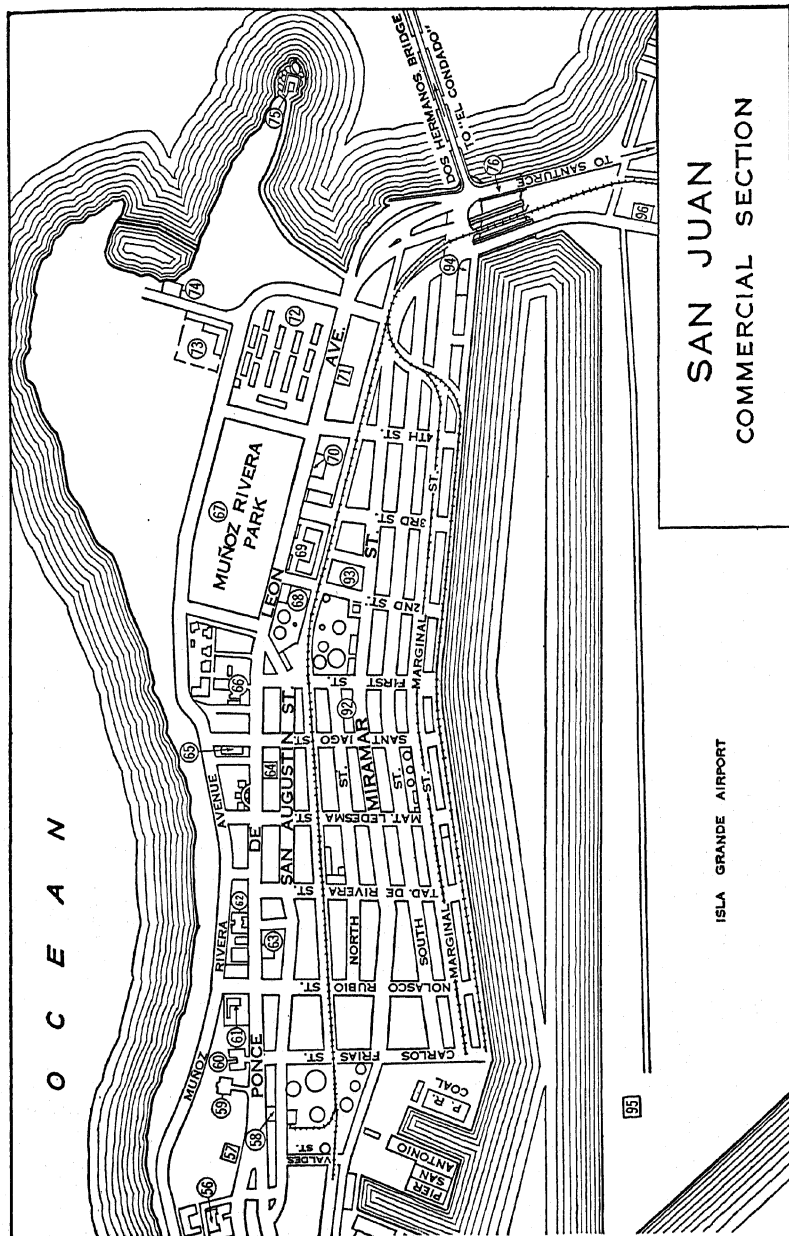
3. The ARSENAL, comprising a group of buildings containing interesting fragments of the original architecture in its maze of patios, was the Royal Navy Yard during Spanish Days and was the last Spanish foothold in Puerto

POINTS OF INTEREST—SAN JUAN

- | | |
|---|--|
| 1. Federal Building | 19. Lottery Bureau |
| 2. United States Customhouse | 20. Elzaburu Home |
| 3. Arsenal | 21. Municipal Theater |
| 4. Old Penitentiary | 22. Plaza de Colón |
| 5. San Juan Gate | 23. San Francisco Church |
| 6. Casa Blanca | 24. Rialto Theater |
| 7. Military Hospital | 25. Plaza Baldorioty de Castro |
| 8. Palace of the Catholic Bishop | 26. Bank of Nova Scotia |
| 9. Municipal Market | 27. Banco Popular |
| 10. José Campeche's Birthplace | 28. Santa Ana Church |
| 11. Asilo de Párvulos | 29. Royal Bank of Canada |
| 12. Lincoln Grade School | 30. National City Bank |
| 13. San Cristóbal Castle | 31. Chase National Bank |
| 14. La Fortaleza or the Governor's Palace | 32. Puerto Rico Chamber of Commerce |
| 15. Hospital of La Concepcion | 33. El Mundo Building |
| 16. Department of Justice | 34. Capilla del Santo Cristo de La Salud |
| 17. Department of Education | 35. Diputación Building |
| 18. Hugh O'Neill Memorial Presbyterian Church | |

Rico; the Spanish troops sailed from here in 1898 for the Mother Country. Construction was commenced in 1800. In 1818 the Guard House was constructed with Island funds and *situados* (*see History*), and the building on the north end and the portal in 1837. During the first years of the American occupation this was the Naval Section. It now serves as office for the Insular Department of Labor and other governmental agencies.

-
- | | |
|---------------------------------------|---|
| 36. Cathedral of San Juan Bautista | 60. José Celso Barbosa Grade School |
| 37. Plazuela de Las Monjas | 61. Asilo de Ancianos |
| 38. Conciliar Seminary | 62. St. Augustine Church, School, and Convent |
| 39. San José Plaza | 63. Notre Dame Industrial School |
| 40. San José Church | 64. St. Luke's Protestant Episcopal Church |
| 41. Old Santo Domingo Convent | 65. Martin Brumbaugh Grade School |
| 42. Ballajá Barracks | 66. United States Naval Radio Station |
| 43. Beneficencia Barracks | 67. Muñoz Rivera Park |
| 44. El Morro Grounds | 68. British Consulate |
| 45. Castillo de San Felipe Del Morro | 69. Porto Rican American Tobacco Company |
| 46. Casino of Puerto Rico | 70. Cobián Film Center |
| 47. José Julián Acosta Grade School | 71. Templo Del Maestro |
| 48. Industrial Commission Building | 72. Puerto Rico Reconstruction Administration |
| 49. Red Cross Building | 73. Sixto Escobar Athletic Park |
| 50. Young Men's Christian Association | 74. Escambrón Beach Club |
| 51. Puerto Rico Atheneum | 75. San Gerónimo Castle |
| 52. Insular Library | 76. San Antonio Bridge |
| 53. Casa de España | 90. Ochoa Building |
| 54. Insular Capitol | 91. Water Front |
| 55. Victory Monument | 92. Falansterio |
| 56. School of Tropical Medicine | 93. Municipal Jail |
| 57. National Guard Headquarters | 94. San Juan Yacht Club |
| 58. Baptist Mission Church | 95. Isla Grande Airport |
| 59. United States Weather Bureau | 96. Independent Film Center |



SAN JUAN COMMERCIAL SECTION

Retrace Arsenal to Depósito St. (L) into Princesa St.

4. The OLD PENITENTIARY (R), built in 1837 with funds from the Treasury of Puerto Rico, is situated on El Paseo de La Princesa, once a fashionable promenade. It is a two-story building with a simple facade surmounted by a clock and belfry.

Straight ahead from Princesa St. on Sea Wall Drive to foot of Caleta de San Juan.

5. SAN JUAN GATE, completed about 1641, is the only remaining one of five original gates of the old city walls, save those on the north of later date. Although the huge wooden doors of the gate, studded with enormous brass-headed nails, bear the date of 1749, they are in excellent condition and swing readily on their pivot hinges. For many years this was the main entrance to the city, and the small cove lying before it was the chief harbor. Here travelers disembarked and passed up the hill to the Cathedral to give thanks for a safe arrival.

L. on Recinto Oeste into Sol St., then L. on Hospital St. to foot of San Sebastián St.

6. CASA BLANCA (*private*), a house of palatial proportions set in a newly remodeled garden, was originally built in 1523 for Juan Ponce de León in recompense for his losses at Caparra, which he had to leave when the settlement was transferred across the Bay. He was granted the privilege of converting this building into a fortress and keeping arms in custody. In 1527 it was constructed as it now stands by García Troche, a son-in-law of Ponce de León. In 1531 a Royal Decree ordered that it should cease to be considered a fortress, and it then became the residence of the Ponce de León family, although the *con-*

quistador himself never lived there. It remained the property of the family until 1773, when the Spanish Government took possession of it and removed the coat-of-arms. Through the initiative of Don Dionisio Trigo, a Spanish citizen residing in Puerto Rico, the coat-of-arms of the Ponce de León family has been restored. The gleaming white walls of Casa Blanca rise high above the city battlements and overlook the Bay. In this fine example of Spanish architecture there is no frowning solid expanse of masonry; it is pierced with windows and constructed so that there is an uninterrupted flow of air through the spacious rooms and halls. This historic edifice is now the residence of the Commandant of the United States troops in Puerto Rico.

Retrace San Sebastián St. to N. cor. of Hospital St.

7. MILITARY HOSPITAL (L) is a large and commodious building constructed by Bishop Don Manuel Giménez Pérez, with parochial income, alms, and contributions; it was destined for a charity hospital and finished in the year 1782. On June 9, 1809, the adjoining house on the east side was incorporated with the hospital under the name of *Casa de Recogidas* (Poor House), which was supported with funds raised from a tax imposed on flour by the Municipality of San Juan. On account of the tax imposed, when the hospital was turned over to the government and converted into a military hospital, it was stipulated that the city had a right to 25 beds for the city poor, and in emergencies if the beds were required by the military authorities, the city was compensated by the payment of a certain amount for each bed. During the war with England in 1797 the hospital was turned over to the Government by the Bishop and since then has been used as a military hospital.

Straight ahead on San Sebastián St.

8. PALACE OF THE CATHOLIC BISHOP (*El Obispado*) (*open by special permission*), SW. corner San Sebastián and del Cristo Sts., another immense house of the early colonial period, was bought by Bishop Sebastián Lorenzo Pizarro from Doña María de Amezquita y Ayala. He rebuilt it and went there to live in 1733. His desire was to make this house a permanent Bishop's Palace, but Royal permission was not granted until November 1, 1738, two years after his death. The Palace contains many fine works of art.

L. to foot of Plaza del Mercado St.

9. The MUNICIPAL MARKET (*open daily*), is a large enclosed square with booths and stalls around the building where native fruits, vegetables, and flowers, as well as produce found in North American markets, are displayed. Fowl, pigs, and goats add to the confusion of an early market morning. This building was constructed in 1852 with funds from the Municipality of San Juan, in whose charge it has always been. The land on which it stands was formerly part of the grounds of the *Convento de Santo Domingo* (Dominican Convent).

Retrace Plaza del Mercado St. L. on San Sebastián St.

10. JOSÉ CAMPECHE'S BIRTHPLACE (*private*), SE. corner Cruz St. is an imposing house of Sevillian style where José Campeche, best known Puerto Rican painter, was born. A tablet placed by the Economic Society of Friends of the Country in 1866 marks the spot. The house has been converted into a tenement.

11. ASILO DE PARVULOS (*visitors welcome*), 64 San Sebastián St., is a building of Spanish colonial days. The facade is painted yellow, the windows are grilled, and over

the main door is a heart carved in stone. The institution was founded in 1861 to give instruction to the poor children of the city, and is affiliated with the Roman Catholic Church.

R. on Boulevard St. into Sol St.

12. The LINCOLN GRADE SCHOOL (L) stands on the former site of an old Polvorín where ammunition was stored. From here is a splendid view of the Atlantic Ocean. A STATUE OF LINCOLN stands on the west corner of the school building grounds.

13. SAN CRISTÓBAL CASTLE (*open daily*) is a massive fortification on a hill at the eastern end of old San Juan. The city suffered so many serious attacks from invaders—particularly from the British in 1595 and 1598 and the Dutch in 1625—that the mother country finally became alarmed and decided to construct a large fort to protect the land entrance to the city. Construction of the original fort was started in 1631, but by 1771, when it was completed, the defense was not considered adequate. Spain was at war with England, and it was feared that San Juan would again be attacked. In 1776 Colonel Tomás O'Daly of the Spanish Royal Engineers was sent to strengthen and enlarge the fortifications, which were finished in 1783. The expected English attack did not take place until 1797, when a large British force landed at Santurce on what is now Condado Beach. The British attempted to bombard Fort San Cristóbal and to capture San Juan, but the strengthened defenses of the enlarged fortification proved powerful enough to resist the attack, and the invaders were soon driven away. The entrance is by a steep ramp that leads to EL CABALLERO BATTERY, beyond which lie deep moats and strong outworks known as EL ABANICO (the fan) because of their shape. From a battery on this fort was fired the first shot of the Spanish-American War in Puerto Rico,

on May 10, 1898. It was aimed at the *Yale*, one of the besieging ships, and two days later Admiral Sampson opened the bombardment of San Juan and its defenses. The section called SANTA BÁRBARA, after the Saint who guards against explosive catastrophes, consists of tunnels, corridors, and rooms used by Spaniards for storing ammunition, and used for the same purpose today. There are also long tunnels, now closed, which once connected the castle with El Morro, La Fortaleza, the Escambrón and La Marina.

In the main tunnel is a room which formerly served as a cell for those condemned to die. Here, while an artillery captain was awaiting his doom, he painted on the walls of his dismal cell pictures of seven Spanish galleons which may still be seen. Considering the fact that the only light the painter had came from a small ventilating shaft, it was a remarkable achievement.

Under the Fort is a large cistern which provided a good part of San Juan's water supply. High on the wall over this cistern, when the fort was completed, was hung a picture of *San Cristóbal* (Saint Christopher). One day a new chaplain arrived and decided to remove this picture to the chapel of the fort; there was no more rain, and the cistern became dry. The prayers of the entire population proved of no avail, until suddenly one evening there was a down-pour and the cistern was filled with water. The next morning when the soldiers went to chapel services the venerated *San Cristóbal* was missing—he was back in his original place watching the rising water. From that day to this no one has dared to take him away, and the cistern is never dry.

Many are the legends and countless are the pictures of LA GARITA DEL DIABLO, the lone outpost jutting far out into the ocean on a rocky promontory, known as the Haunted Sentry Box, literally the Devil's Sentry Box. One story tells of the strange disappearance of every sentinel

stationed there—leaving nothing behind but his uniform and a strong odor of brimstone. A more romantic legend tells of an Indian maiden whose love was won by a Spanish soldier stationed at the fort. Her happiness was short-lived, for he soon deserted her. After the birth of their baby she swore vengeance not only on her unfaithful lover, but on all who wore the same uniform. Just before the dawn, when man's energy is lowest, she would steal unseen into the sentry box, stab the sentinel and throw his body into the sea. Many were the men who vanished, and no one could account for the missing sentinels. One fateful morning the sentinel she found on duty was the man for whom she had been waiting. A quick thrust of steel, and her vengeance was complete. Her vow fulfilled, the unhappy Indian girl disappeared, whether back to her native mountains or to join her former lover in death the tale does not reveal. At any rate, the sentinels were thereafter unmolested.

In its day San Cristóbal was the last word in fortification. Today it serves as a barracks for the military forces, and a great part of it is no longer in use.

FOOT TOUR 2—1 m.

E. on Fortaleza St.

14. LA FORTALEZA or the GOVERNOR'S PALACE (*open daily*) has a long and colorful history, closely allied to the history of the whole Island.

In 1529, after the people of San Juan had begged for funds to construct defenses against foreign attacks, the mother country authorized the construction of "a bastion and embattled tower." This was the first defense to be constructed in Puerto Rico. At a later date the south tower was added, and by 1540 the oldest part of the present building was completed. The inside walls were of tamped

earth, and those facing the bay were of stone. Before the fort was entirely completed it had become almost useless as a defense.

In 1625, when the Dutch were successful in entering San Juan harbor, they captured La Fortaleza. They failed to take El Morro, and sailed away, first having set fire to San Juan. La Fortaleza, except for the walls, was almost burned to the ground. When it was reconstructed on a more elaborate plan in 1639 it became known as the *Casa de Gobierno* (Government House), serving then as now for the residence of the Governor and government offices.

About that time it was necessary to demolish the chapel or "hermitage" of Santa Catalina to make room for the *Puerta San Juan* (San Juan Gate) and sea wall below La Fortaleza. The revered statue of Santiago, the patron saint of Spain, was enshrined in this little chapel, which was rebuilt in the northwest or original "embattled tower," and for many years this was the private chapel of the governor's family. Because of this shrine the governor's residence has also been called *Real Fortaleza de Santa Catalina*.

A notable architectural feature is the entrance tower and dome, distinctly Moorish in character. The vault of the dome is decorated with mural paintings symbolic of the military activities of Spain. The walls of the square tower on which the dome rests have four graceful arches with delicate decorations in white stucco. These serve as frames for beautifully designed casement windows, unmistakably Moorish in type, with delicate arabesques and geometrical traceries. On either side of the arches are slender engaged columns with foliated bases and Corinthian capitals, while in the angles of the walls are figures and floral designs in stucco. Below this section of the tower are twelve sculptured heads placed directly underneath an elaborate double cornice. The lower wall space is divided into long panels by arches of stucco and in the center of three of them is a

square tablet with figures in bas-relief. One represents the royal house of León (a lion rampant), another the royal house of Castille (a battlemented castle surmounted by a crown), and the third is the lamb of Saint John, with book and banner, the arms of Puerto Rico. The room extending across the entire front of the mansion on the first floor above the street was known in Spanish times as the "throne room." It is now used as the Governor's office. Interesting architectural features are the twelve graceful pilasters of Ionic design which run from the floor to the frieze below the cornice; the huge carved shells in white stucco over each of the ten openings, each shell serving as the setting for a well-composed symbolic group in bas-relief; and the frieze of garlands in all the openings which have the color and texture that only age can give. On two sides long-hinged doors are placed behind shutters that open to the long balconies. The doors opening into the inner room have grilled panels. The floor is of the same marble tiling, in shades of light and dark gray, that is used throughout the building.

The drawing room was remodeled in 1846. Although the aspect of La Fortaleza was changed in some particulars during the administration of the Count of Mirasol, certain interior decorations were completed (1847-48) by his successor, General Juan Prim y Prats, Count of Reus, who decorated the ceiling of the drawing room by blazoning thereon the arms of his lineage in the order of surnames, as was the custom. This rosette in the center of the ceiling of the drawing room, or salon, is part of the historical background of La Fortaleza. The cornice in the room is supported by twelve fluted pilasters with Corinthian capitals, the space between being panelled for the insertion of large mirrors. All the openings have mahogany doors, most of them with hinged panels, and they fold back into niches in the thick walls. The oldest of these have iron

bars that may be placed diagonally across the doors when these are open. These swinging doors are used in all parts of the house.

The spacious dining room emphasizes one of the most interesting features of Spanish architecture, which is to concentrate decoration at given points, as about doors and windows or towers. At either end of the room are beautifully designed doorways, the only architectural decorations of the room, with the exception of the beamed ceiling. The stained glass in the side panels of the doorways and in the fan above is richly colored and of fine quality. One of these doorways gives entrance from the hall, and the other opens into the breakfast room, which has shutters on three sides and overlooks the sea. The dining room is paralleled by long galleries accessible through French doors. The galleries are completely screened by *persiennes* (shutters), which provide ample air and light and give protection from sun and rain.

The stairway, of mahogany and native wood, extends from the patio to the upper floor. The treads of the stairs are wide, and the balusters, which are turned, are set in metal brackets. The return of the stairs is paneled in an unusual design.

The long corridor on the upper floor repeats the well-proportioned Ionic columns of the lower floor. The space between the columns is filled by shutters with insets of old Spanish stained glass, through which the sun throws rainbow-like shadows across the tiled floor and on the opposite wall.

Surmounting one of the two towers which are distinctive features of La Fortaleza is a small cylindrical sundial. Not so common as the horizontal dial, this type was often used during the sixteenth and seventeenth centuries as a useful and decorative termination of a gable or buttress on churches or castles. The stiles or gnomons which point the

shadows on the dial are shaped like bats' wings and are of unusual beauty of design. The dial itself terminates in a conical roof that carries a weather vane in the form of an arrow.

Early records mention the surrounding grounds as "a large extension of land in the form of an amphitheater for garden and trucking"; but today the Governor's Gardens, with the great profusion of tropical trees, shrubs and flowers, are a triumph of Nature and the landscape gardener's art. The esplanade atop the old sea wall, where teas and dances are held, with the sentry boxes and ancient guns still in place, is banked with bright colored flowers and green foliage which enhances the charm of this historic edifice.

The restoration of La Fortaleza, operated as a WPA project administered by the Puerto Rican Department of the U. S. Army, with grants of \$425,000 of Federal money and \$80,000 of Insular money, was completed in June, 1940. Both La Fortaleza and the office building directly connected with it were included in the restoration. A definite effort was made to retain all the Spanish architecture and decorations. Modernization included the addition of an elevator, installation of modern electrical appliances, bath fixtures, kitchen furnishings, and the replacement of the original brick roof with a reinforced concrete roof. The garden was made to follow the original plan. Necessary repairs were made to the office building.

15. HOSPITAL OF LA CONCEPCION (*visitors welcome*), R. on a small lot at the southern end of La Fortaleza, perched on the sea wall overlooking the bay, was begun in 1524 and opened in 1541. The building has been remodeled and enlarged, but it still retains some of the original features. The CHAPEL, one of the prettiest in the Island, contains statues and old paintings. The institution has been in charge of the *Siervas de María* (Servants of Mary), a Roman Catholic religious order, for 400 years.

The arrival of galleons from the mother country was an occasion of great rejoicing for the struggling town of San Juan during the turbulent colonization period, and the whole population went down to welcome the ships. The nuns joined the celebration by waving the colors of Spain at the galleons. Down through the centuries this custom has been preserved, and today the captain of a ship gallantly acknowledges the salute of the community.

16. DEPARTMENT OF JUSTICE (*open daily*), No. 3 Allen St., was formerly known as *Casa Roja* and *Palacio Rojo*. It was originally built for an artillery park, and was called *La Sala de Armas*. Later it became the home of the *Segundo Cabo de la Plaza*, the Post Commanding Officer. It is handsome in its spaciousness and lovely style, being typical of many structures of its period, with arched corridors, a maze of patios, and terraces. During the military government the building was occupied by Brigadier General Grant, and with the establishment of civil rule in 1900, the upper floor became the residence of Attorney-General Harlan.

17. DEPARTMENT OF EDUCATION (*open daily*), No. 5 Allen St., is another building of palatial proportions, adjoining the Department of Justice. The offices of the Insular Civil Service Commission are here.

18. THE HUGH O'NEILL MEMORIAL PRESBYTERIAN CHURCH, No. 10 Allen St., was donated by the family of the same name. In the rear of the church an annex was built in 1929; the upper floor is used as the manse and in the lower is a kindergarten.

19. LOTTERY BUREAU (*open daily*) is situated on the second floor of No. 21 Allen St. The lottery was legalized by an act of the Insular Legislature signed by Governor Blanton Winship on May 14, 1934. Its administration is patterned after the Spanish lottery. Bureau officials resurrected the original machinery from the Banco de

Puerto Rico, including the bronze spheres used by the Provincial Lottery prior to the American occupation of the Island, when the lottery was declared illegal by the United States Government. These spheres, dating back to 1855, are two large ball-like cages so constructed that their contents are plainly visible. Each cage is now mounted on a motor driven shaft, which replaces the old hand cranks of the original machinery.

The drawing takes place before three prominent citizens, who act as honorary witnesses, and the public at large. Wooden balls are used in lieu of counterfoils at the drawings, to avoid fraud. When a person buys a lottery ticket, there is a corresponding wooden ball with the ticket number impressed on its surface on file at the Lottery Bureau. Each ball has a hole pierced through it. Balls numbered from 1 to 100 are strung together in numerical order, and referred to as "number balls." Another set of wooden balls represents the 3,000-odd prizes, with the amount to be won impressed on their surface. In similar manner they are strung in rows of 100 to each string. These are the "prize amount balls." Each of the number and prize amount strings are placed in metal clips, where they can be inspected by anyone in the audience before the actual drawing takes place. With the inspection over, the number strings are hoisted one at a time over a large glass and bronze box where they are cut, the balls dropping into the box, which is called a *meseta*, from where they fall into the cage proper. When all the "number balls" have passed into the cage, the top of the cage is locked. This same procedure is carried out with the "prize amount balls" in the other cage. The President of the Board orders the cage motors to be started and the two spheres begin to revolve, first in a clockwise and then in a counter-clockwise direction for several minutes. Once the cages have stopped the trap doors at the bottom of the two cages are automatically and simul-

taneously opened and a ball from each cage runs out, one corresponding to a ticket number and another to the amount of the prize for that ticket. Two boys from the Insular Orphan Asylum call out the numbers impressed on the "number ball" and "prize amount ball," which may be inspected by the Board, Bureau officials, and the spectators.

The Lottery has become an important source of revenue for the Insular Government. For the fiscal year ending June 30, 1939, the total lottery tickets sold amounted to \$3,768,420, and \$2,743,160 was distributed as prizes; operating expenses were approximately \$100,000 and, as provided by law, the total net income of \$950,522.02 was distributed among various agencies, to combat tuberculosis, to relieve the destitute in second- and third-class municipalities, and for municipal hospitalization.

20. ELZABURU HOME (*private*) NE. corner Cruz St. is the birthplace of Manuel de Elzaburu y Vizcarrondo, founder of the Atheneum and the Institute of Higher Education in San Juan. The school remained in operation until 1898. The house is characterized by railed balconies and irregularly placed windows. The first floor is occupied by a business establishment, while the upper is rented as apartments.

21. MUNICIPAL THEATER (Teatro Tapia), S. corner Plaza Colón, built in 1825 at a cost of 154,974 *pesos* and remodeled in 1873, is a lovely old building, well worth a visit. The auditorium is horseshoe shaped, with an upper and lower tier of boxes. This was a project of Governor Miguel de la Torre. Funds were raised by popular subscription and a tax on bread and liquors.

22. PLAZA DE COLON, formerly known as Plaza de Santiago, is graced with a STATUE OF COLUMBUS, dedicated in 1893 on the 400th anniversary of the discovery of Puerto Rico. The bronze tablets around the monument depict different episodes of Columbus' life.

23. SAN FRANCISCO CHURCH (R), also known as *Capilla Franciscana* (Franciscan Chapel), was a wing of the San Francisco Convent, which was commenced in 1642 with Island funds and was finished in 1651. After the abolition of the Franciscan Order, the *Intendencia* (Treasury) of Puerto Rico took charge of the building in 1812, which originally occupied the whole of the block comprised today between Luna and San Francisco Sts., Callejón del Tamarindo, and Plaza San Francisco. The Governor turned the Convent into quarters of an artillery corps. After the American occupation it was used as a magazine for public works of the Island. The apartments of the north side of the lower floor were always, at the time of the Spanish dominion, the source of yellow fever which spread throughout the city and the whole Island. In 1918 this part was demolished for the ROMAN BALDORIOTY DE CASTRO TECHNICAL SCHOOL, a large modern school, the first of its kind in the Island. Adjoining the church is the ACADEMIA CATÓLICA, an elementary and secondary parochial school with a large enrollment.

24. The RIALTO THEATER (R) constructed shortly after the change of sovereignty as a Protestant Church, was used for that purpose for several years. The land adjoining was part of Plaza San Francisco.

25. PLAZA BALDORIOTY DE CASTRO (L), formerly known as Plaza de Armas y Alfonso XIII, is the center of San Juan's daily life. Here people assemble to discuss current affairs and gather around a *kiosko* to listen to the latest news and racing results over the radio. Prior to the 1928 hurricane the square was flanked by huge trees; today it is rather bare-looking. On the north side is the AYUNTAMIENTO, a reproduction of the Municipal Building or Casa del Rey of Madrid. Originally an old residence, the city bought and reconstructed it between 1796-99. The facade is featured by two graceful towers, one housing a

chime clock placed there in 1819. Under these two towers, and connecting them, is an arcade wall in traditional romantic style. The main floor is used for offices of the City Manager, and on the ground floor is the MUNICIPAL LIBRARY. In the City Manager's office is a large oil portrait of San Juan, believed to have been painted by Murillo. To the west the INTENDENCIA (TREASURY) BUILDING, erected between 1848 and 1851, is of the best Spanish Renaissance style. Three stories in height, of masonry, with a flat roof, it has beautiful wrought-iron balconies on the principal facade. Along the east and south sides of the Plaza are department stores, offices, shops, and souvenir stores.

FOOT TOUR 3—2 m.

26. BANK OF NOVA SCOTIA, NE. corner San Justo St., was established early in the present century. The fine modern building, reminiscent of the work of Frank Lloyd Wright, was designed by Antonin Nechodoma and built about 1920. The bank proper occupies the main floor and mezzanine; and the upper three stories are rented offices. Delicately carved terra-cotta ornaments, bright colored mosaics, modernistic bronze grilles and leaded glass windows make the building attractive and pleasing.

27. BANCO POPULAR, SE. corner San Justo St., was a 1939 addition to San Juan's skyline. A vertical mass of modern architecture ten stories high, this building stands alone on a city block facing the bay, a concrete shaft towering over all adjacent buildings. The basement, approached from the Plaza Dabán level, contains shops and the bank vaults. The main floor and mezzanine, beautifully finished in marble and bronze, are approached from the main entrance on Tetuán Street, and occupied by the bank, with a high banking room lighted by an imposing leaded glass window. The upper floors are devoted to offices, and a roof

garden restaurant and bar atop the building command a bird's-eye view of the city and across the bay. The entire building is air conditioned.

28. SANTA ANA CHURCH (R) dates back to early colonial days. George Clifford, Earl of Cumberland, who invaded San Juan in 1597, speaks of the Church in a letter to England. The altar and oil paintings are well set off by the candle lights for the Perpetual Adoration, which ends each day with Benediction services at 5 o'clock. The church shows the superimposed Tuscan orders so common in the early Renaissance period.

29. ROYAL BANK OF CANADA (L) built in 1912 is an imposing structure typical of banking houses. Designed in the Corinthian style and executed in cut stone, the main entrance is flanked by magnificent columns. The building rests on a rusticated base with small heavily barred windows which give it a powerful feeling. The bank began to operate in San Juan in 1908.

30. NATIONAL CITY BANK is a typical bank structure of modern style, with verde antique marble base and grand entrance motif with large glass areas, set off against a smooth, cream-colored concrete background.

31. The CHASE NATIONAL BANK, SW. corner Cruz St., is housed in an old building formerly occupied by the Spanish Bank of Puerto Rico. It is late Renaissance in character, leaning towards the Baroque. The rusticated facade is pierced by large pedimented windows opening into iron balconies at the second floor level. The balconies and grilles are interesting.

32. PUERTO RICO CHAMBER OF COMMERCE (L) commands a splendid view of the Bay. The building was designed by Antonin Nechodoma. Its facade, formed by straight shafts of brown terra-cotta, and its horizontal roof lines are relieved by delicate leaded glass windows and the colored mosaic typical of Nechodoma's work.

33. EL MUNDO BUILDING, NW. corner San José St., one of the highest in Puerto Rico, is the home of one of Puerto Rico's leading newspapers. Built in 1923 from the design of Francisco Roldán, a Spanish architect, it shows the strong Moorish influence pervading most of his work. The facades are most interesting with their graceful cusped arches and splayed openings accented by bright colored tile. The main entrance and lobby walls have a high wainscot of glazed tile of bright colors and of authentic Moorish pattern.

34. CAPILLA DEL SANTO CRISTO DE LA SALUD, foot of Cristo St., is a tiny chapel built about 1753 as an act of thanksgiving for a miraculous event. Horse racing was very popular then, as now, but in those days races were held in the streets of the town, the favorite course being from the top of the city wall, at the foot of Cristo Street, up the hill to the end of the street at San José Church. After each race the contestants would walk their horses down the hill, then gallop furiously up again.

One memorable day Baltasar Montañez and his companion, not content with racing up the hill, decided to race down as well. The horse of Montañez ran at such a terrific pace that when the bottom of the hill was reached he was unable to control his mount, and both horse and rider were precipitated over the wall. The Government Secretary, His Excellency General Tomás Mateo Prats, who was watching the daring racers, cried out, "Save him, Blessed Christ of Health!" The spectators rushed to the spot, and found that the horse had been hurled to its death on the rocks below on the other side of the wall, but young Montañez had miraculously escaped with only slight bruises.

In honor of the Blessed Christ who had saved the life of the young man, General Prats was given permission by the Governor of the Indies and the Bishop to erect this little chapel, built of masonry faced with stone, resting squarely

on the city wall. It consists of a small room 14 by 20 feet, with a barrel-vaulted ceiling. In the west wall there is a small arched opening leading to the sacristy, a small room with a high window and flat beamed ceiling. Over the altar, of exquisite gold and silver repoussé work, is a painting of the *Crucifixion*. In the triptych below are *St. Catharine, Virgin and Martyr*; and *St. Thomas, the Apostle*. Another painting, the *Blessed Christ of Health*, considered miraculous and greatly venerated, hangs in a niche. Yearly festivals in honor of the Blessed Christ of Health were held, the expenses being paid by the people of the neighborhood. Their faith and devotion were expressed by numerous votive offerings of gold and silver, afterwards melted and cast into different objects for use in the chapel.

To shelter the crowds that gathered to celebrate the festivals, especially the traditional feast of the Saviour on the 6th of August, the brick masonry portico was later added. One of the three large arches, the west, is the entrance to a private garden which in ancient days must have been a public or military walk along the top of the city wall. The north arch opens on Santo Cristo Street, and the east on Tetuán Street. These are large enough to permit the passage of vehicles. On the fourth side is the chapel. Between the portico and chapel a well designed cast-iron grille has recently been set into the masonry jambs. The opening being wide, the grille is divided into three panels. The central portion has two leaves and opens on the portico.

As time passed and memory of the miraculous event grew dim, festivals were held less frequently, the little chapel gradually fell into a ruinous condition, and it was finally closed and its treasures placed in the San Juan Cathedral. The city even planned to tear down the building to make room for increasing traffic. But thanks to the Catholic Daughters and the Women's Civic Club, it was

restored to its former condition in 1927. On the west wall of the portico is a tablet commemorating this restoration.

In 1931, on the Feast of the Saviour, an old document which had been lost for nearly two centuries was found. Signed by Guido, Bishop of Cesena, Italy, one of the oldest dioceses in Christendom, this document testified to the authenticity of a sacred relic sent from Rome to the Chapel in 1761:

To each and everyone of those who see the present authentic document we testify and make known that certain Sacred Relics, taken from authentic places, having been shown to us with sealed authentic documents, were examined carefully by us, and we extracted from them particles of the bones of St. John the Baptist and of the cloth of St. Joseph, spouse of the Blessed Virgin Mary, which we reverently placed in a round silver casket, tied with red silk thread and sealed with our small seal in Spanish wax in proof of the certain identity of the same; and we seal and give and donate for the greater glory of God and for the veneration of the saints, with faculty to retain them, donate them, and expose them to the public veneration of the faithful in any Church, Oratory, or Chapel. In testimony of which we order that these letters, written by us and sealed with our seal, be forwarded. Given by Cesena in our Episcopal Palace this 30th day of July, 1761.

Every year on Holy Thursday, on the Day of Our Saviour, and on other important feast days, this sacred relic is exposed for the veneration of the faithful.

The Catholic Daughters still maintain an active interest in the Chapel. Mass is celebrated every Friday morning at half-past seven, and also on great feast days of the church year.

R. on Cristo St.

35. DIPUTACIÓN BUILDING, NE. corner San Francisco St. (*open daily*) was built in the year 1849 on the site of an old graveyard bought from the Church with funds from the Beneficencia Asylum. Constructed as a market place, it was rented to the Municipality of San Juan for this purpose until the year 1852, when the new market on the

northern wall was built. It was then remodeled for dwellings and so rented until 1872, when the Diputación Provincial of Puerto Rico was created, being turned over to that body as their property. In October, 1873, after the building was remodeled, the Institute of Secondary Education was installed in the western half, and in the eastern half the office of the Diputación was housed on the top floor and the administration of the Lottery on the lower floor. In November, 1898, the Military Government of the United States ordered the lower floor of the eastern half to be occupied by the Post Office Department, later removed to the Federal Building. Various Insular departments now occupy the building.

36. CATHEDRAL OF SAN JUAN BAUTISTA, SE. corner Luna St., has been the scene of many colorful events connected with the history of the Island. The first Cathedral of Puerto Rico was a palm-thatched frame structure built in 1509 by Juan Ponce de León in the little village of Caparra, which was given the rank of city in order that a Cathedral might be established there. It was blessed in 1513 by the Island's first Bishop, Alonso Manso, Canon of Salamanca, who was the first Bishop to arrive in the Western Hemisphere.

After the site of the capital city was changed to San Juan in 1521, it was necessary to erect a new Cathedral. Another palm-thatched frame building was constructed in 1527, but the hurricanes which swept the Island during the course of the next twenty years damaged it so much that the second Bishop, Rodrigo de Bastidas, on his arrival from Hispaniola in 1542, found the structure in such bad shape that he ordered it reconstructed. The foundations of the present Cathedral date from his reconstruction.

In 1615 it was almost ruined by an earthquake; in 1625 it was badly damaged when the Dutch set fire to San Juan; and in 1787 another hurricane caused great damage. The

final rebuilding was begun in November, 1802, and the Cathedral today is a monument to builders of the early nineteenth century.

Made of brick covered with masonry and solid stone it is an excellent example of Spanish Renaissance style, the exterior sparsely decorated. The plan is that of a Latin cross; there are three naves, magnificent domes, and an elaborately decorated choir. The floors are of black and white marble, and the wall space and columns are painted to resemble marble.

The MAIN ALTAR is of white marble, classic and simple and above is a statue of the Sacred Heart. At the right is the ALTAR OF THE SACRED HEART and at the left, the ALTAR OF ST. JOHN THE BAPTIST. In the left lateral nave is the beautiful CHAPEL OF THE PROVIDENCIA. The golden altar and statue were bought by public subscription as a result of the great devotion of the faithful to the Virgin. Facing this, in the right lateral nave, is the CHAPEL OF ST. JOSEPH.

In the wall on the east side is the marble TOMB OF JUAN PONCE DE LEÓN. The inscription reads:

There were transferred to this Cathedral from the Convent of St. Thomas Aquinas (now Saint Joseph), where they repose since 1559, the mortal remains of JUAN PONCE DE LEÓN (native of Campos) whose valiant actions were proof of his noble lineage. Soldier of Grandos, captain in Española, conqueror and governor of San Juan of Borinquén, discoverer and first pioneer of Florida, brave soldier, sagacious leader, loyal subject, just administrator, loving father, indefatigable and consistent worker. Rendered his soul unto God and his body to the earth in Havana (June 1521). Venerating his memory and in honor of the impulse given to Christian civilization by his courageous initiative and by his diligent co-operation extended in this fertile Porto Rican land, consecrated with pious homage by

THE SPANISH CASINO OF SAN JUAN

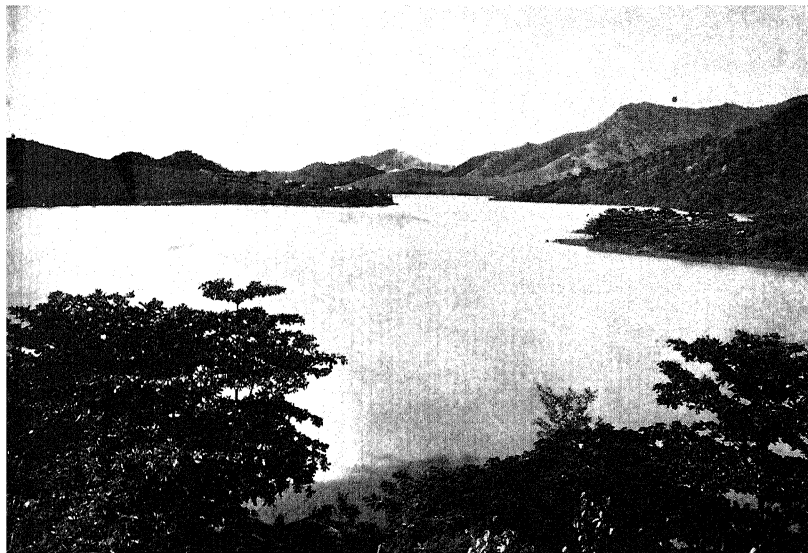
A. D. 1909

Under this stone rest the bones of the strong León who achieved great name by his deeds.



Reconstruction



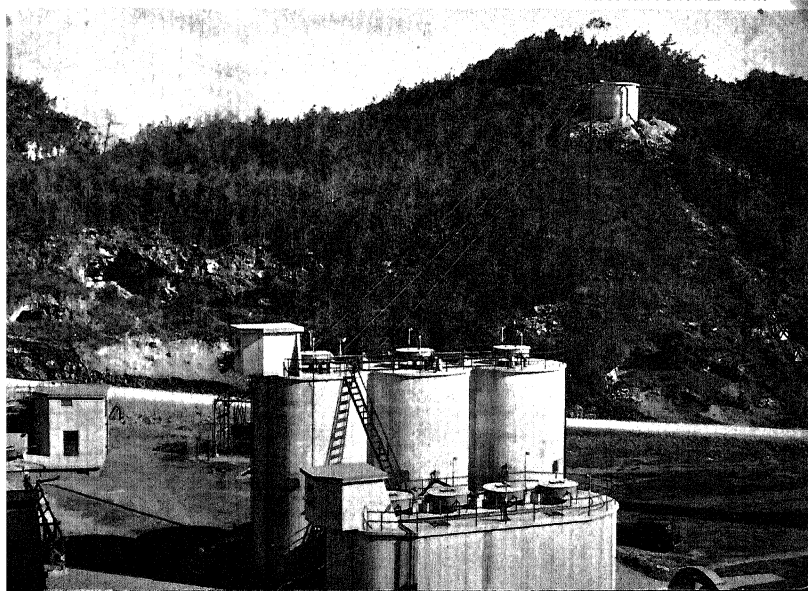


P. R. Reconstruction Adm'n.

PATILLAS RESERVOIR

HYDRO-ELECTRIC PLANT

P. R. Reconstruction Adm'n.





SLUMS, SAN JUAN

W. L. Highton

ELEANOR ROOSEVELT HOUSING DEVELOPMENT

P. R. Reconstruction Adm'n.



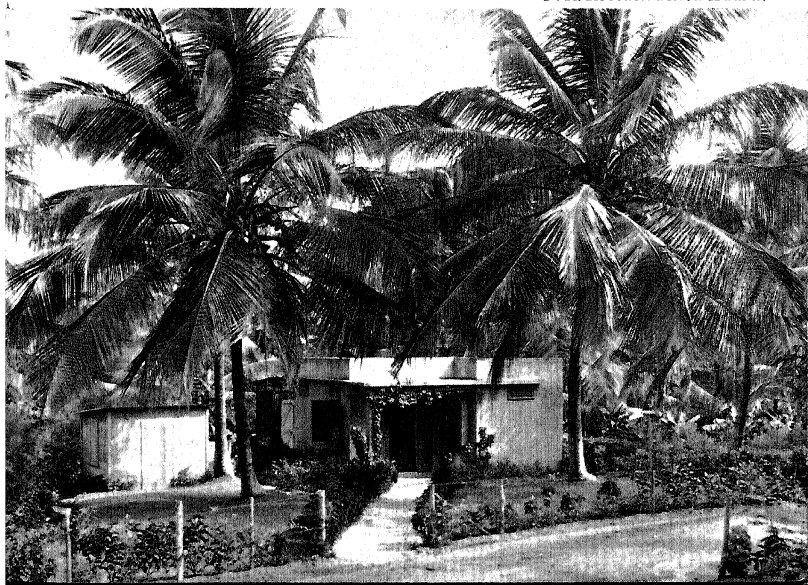


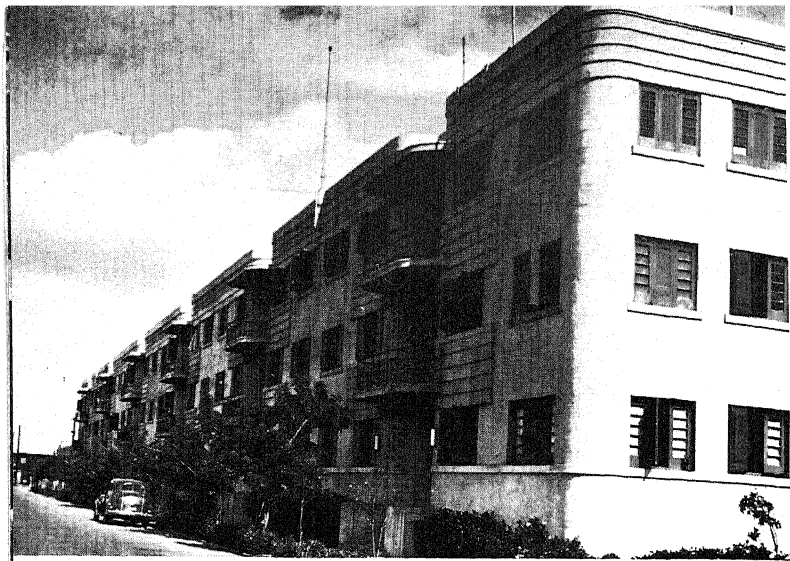
W. L. Highton

RURAL DWELLING

NEW RURAL DWELLING

P. R. Reconstruction Adm'n.





FALANSTERIO HOUSING DEVELOPMENT, SAN JUAN

P. R. News Bureau

P. R. Reconstruction Adm'n.

APARTMENT IN THE FALANSTERIO



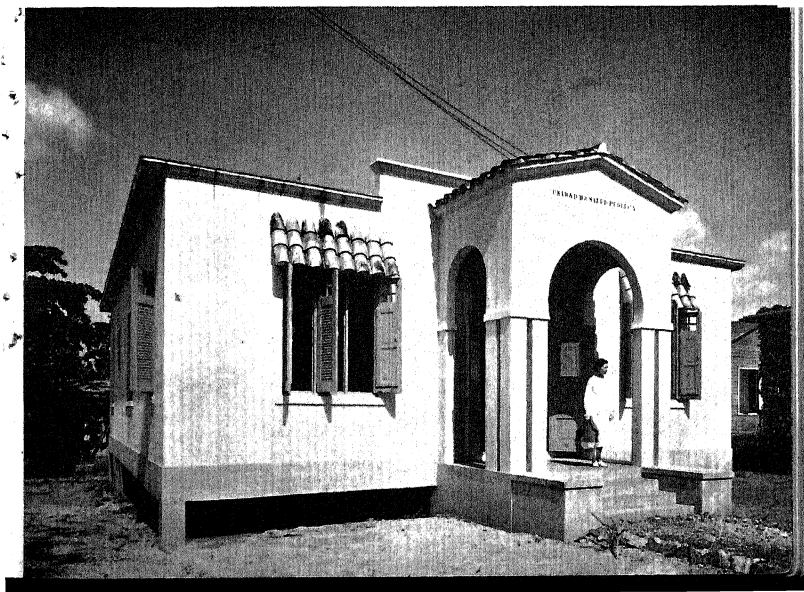


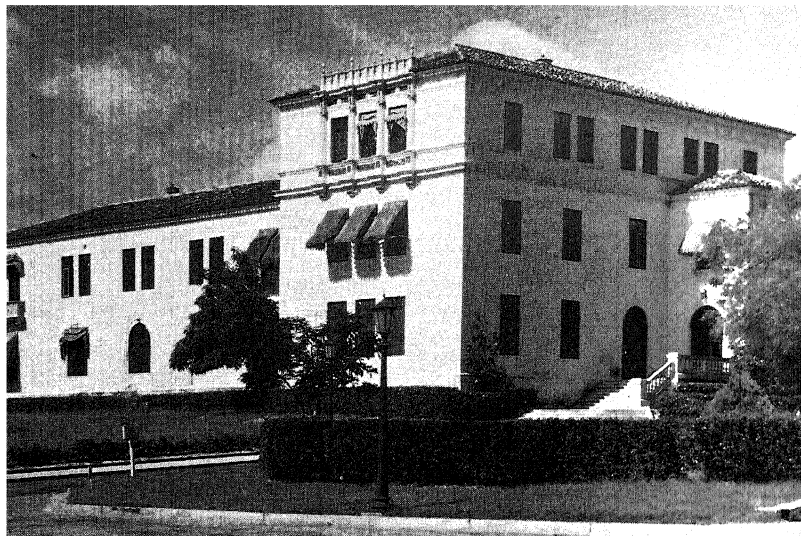
P. R. Reconstruction Adm'n.

SCHOOL OF TROPICAL MEDICINE, SAN JUAN

A PUBLIC HEALTH UNIT

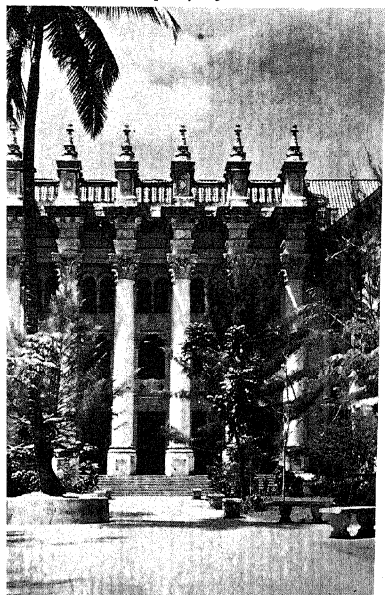
P. R. Reconstruction Adm'n.



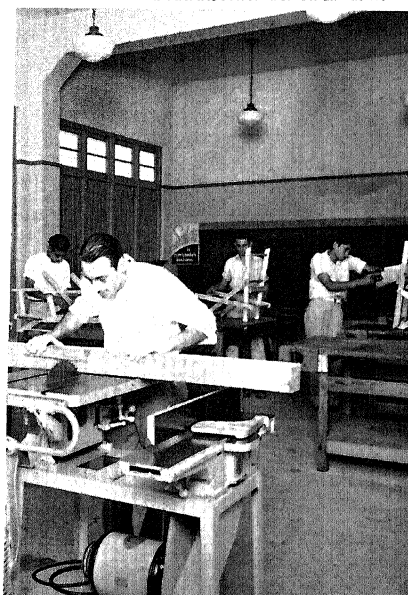


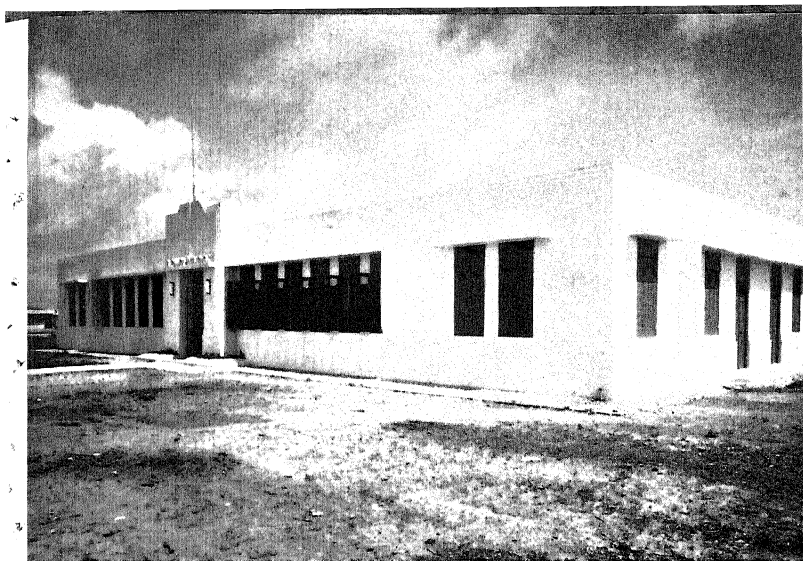
P. R. Reconstruction Adm'n.
COLLEGE OF BUSINESS ADMINISTRATION, UNIV. OF PUERTO RICO

CENTRAL HIGH SCHOOL, SANTURCE,
P. R. Dept. of Agri. and Com.



VOCATIONAL SCHOOL, CAYEY
P. R. Reconstruction Adm'n.





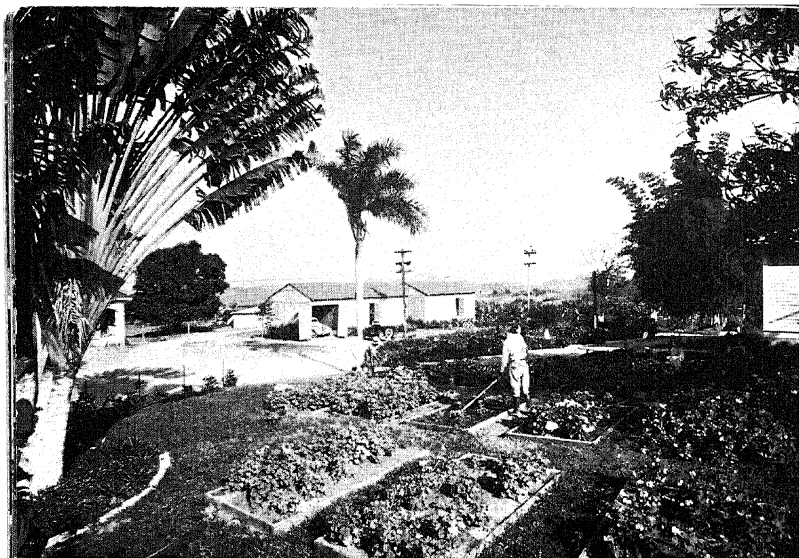
P. R. Reconstruction Adm'n.

GRADE SCHOOL, ELEANOR ROOSEVELT DEVELOPMENT

VOCATIONAL SCHOOL EXHIBIT, ARROYO

P. R. Reconstruction Adm'n.



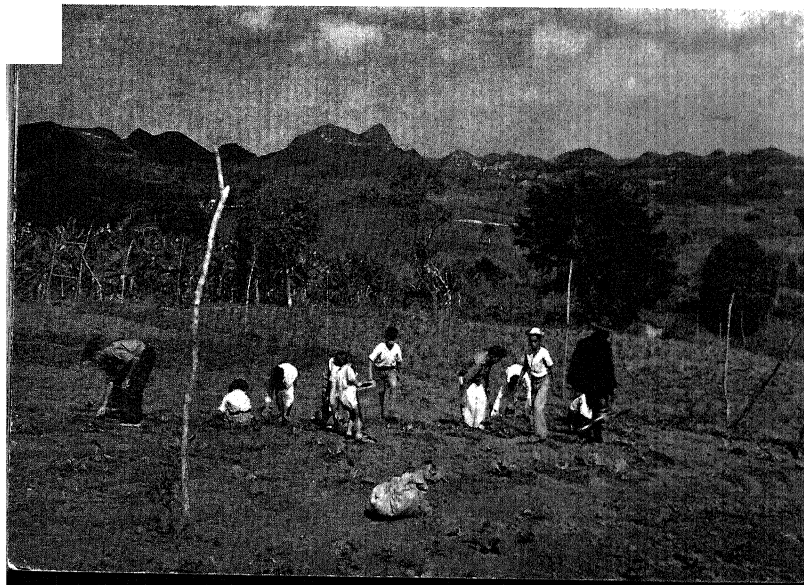


VOCATIONAL SCHOOL FLOWER GARDEN

P. R. Reconstruction Adm'n.

P. R. Reconstruction Adm'n.

VOCATIONAL SCHOOL FARMING CLASS



Facing the tomb is the SHRINE OF SAN PÍO. This is a wax figure lying in a glass coffin containing the relics of a Roman soldier martyred by Caesar for embracing the Christian religion. Although in 1815 Pope Pius VII granted Monsignor Olmedo, Bishop of Puerto Rico, permission to take the relics of a Christian martyr from the catacombs to Puerto Rico, for some reason they were first removed to the Cathedral at Barcelona; but in February, 1862, they finally reached the San Juan Cathedral, while Bishop Carrion was head of the Dioceses. San Pío has always been greatly venerated by the faithful.

In the chapel dedicated to Las Animas, or the CHAPEL OF THE CRUCIFIXION, is an old crucifix. Here is also a mortuary urn containing the remains of Dr. Juan Francisco Pérez, who died in 1798; and a glass and tortoise shell case bordered with silver bells and ornaments, containing the image of Christ, which is carried in religious processions. This was given to the Cathedral in 1852 by Sra. Vda. Isabel Sosa de Ezquiaga, a native of Caracas, Venezuela. In one corner of this Chapel is a very old statue of Nuestra Señora de la Providencia.

On the walls of the Cathedral are several fine old paintings, some believed to be the work of Campeche.

Many former Bishops of the Island are buried in the crypt, including Martín Vázquez, Bernardo Balbuena, Juan Alonso de Solís y Mendoza, and Manuel Jiménez Pérez.

37. PLAZUELA DE LAS MONJAS (L) is a little square facing the Cathedral. On the SW. corner stands the HOUSE DE LAS NAVAJAS, the first *Cabildo* (City Hall) of San Juan. It also served as a residence of early governors, but today is a rooming house. On the NW. corner of the square is the former CARMELITAS CONVENT, built in 1646, which was occupied by the same order until recent years; it is now used for a garage and apartments. The building was donated to the nuns by Doña Ana de Lazos,

who later herself became a nun. The face of the former chapel is in Etruscan style. On the W. side of the square is the MASONIC TEMPLE, formerly St. John's Protestant Episcopal Church, built in 1903.

38. CONCILIAR SEMINARY, 24 Cristo St. (*visitors welcome*), founded in 1832 by Bishop Gutiérrez de Cos, was constructed partly with funds donated from the Municipal Theatre. Later it was turned into a boys' school under the direction of the Jesuits, where many of the most brilliant Puerto Ricans received their education. Today it is a seminary for young men studying for the priesthood. The appearance of the school has changed but little. The large refectory still has the old reading desk, at which one of the students reads aloud at mealtime.

39. SAN JOSÉ PLAZA, R. adjoining San José Church, is a square of the colonial period, and surrounded by massive houses, it retains the atmosphere of its youth. In its center stands a STATUE OF JUAN PONCE DE LEÓN, erected by the city in 1882. The pedestal of the statue, which was made from cannon captured from the British in 1797, is flanked by four tablets with the following inscriptions: South: *Visited the Island in 1508. Returned to colonize it in 1509. Ended his conquest in 1511.* West: *Wounded in Florida in 1521. Died as a consequence a short time after arriving at Cuba.* North: *This city to Juan Ponce de León, Conquistador and first Governor of this Island, June 24, 1882.* East: *Companion of Columbus on his second voyage. Discoverer of Florida and the Island of Bimini.*

40. SAN JOSÉ CHURCH (R), the oldest church in the Western Hemisphere that has been in continuous use, was founded in 1523 with royal authority from their Catholic Majesties by a Dominican Friar, Pedro Antonio de Montesino, and completed in 1528. The Church and Convent of Santo Domingo adjoining were built with funds collected in the Island from *diezmos* (tithes) and *primicias* (offer-

ings of first fruits and crops). At first it was called Santo Tomás de Aquino, but in 1858 the name was changed to San José.

After the Dominican Order was dissolved in Puerto Rico, different societies took charge until 1860, when the Jesuits came in. They were followed by the Society of St. Vincent de Paul, and the Vincentian Fathers are still in charge.

On May 12, 1898, during the Spanish-American War, the church suffered heavy damages, especially the facade, when San Juan was bombarded by the American fleet under Admiral Sampson.

In this ancient church the family of Ponce de León worshipped. The costly HIGH ALTAR, brought from Spain, replaces the original one made of cedar and covered with gold leaf, which was given by Leonor, daughter of Juan Ponce de León, and parts of which are now in the old Church in the town of Loíza. When Ponce de León's remains were brought from Cuba by his grandson in 1559 they rested in a tomb in this Church until 1908, the 400th anniversary of the colonization of Puerto Rico, when they were transferred with great ceremony to the San Juan Cathedral. His coat-of-arms is on the left wall inside the chancel.

In the nave at the right of the chancel is the magnificent gilded ALTAR OF THE SAGRADO CORAZÓN (Sacred Heart). Back of this is the SHRINE OF OUR LADY OF BETHLEHEM. Here, set in an antique silver frame, is the exquisite old painting of LA VIRGEN DE BELÉN (the Virgin of Bethlehem), often copied by noted artists, and believed to be of the Flemish School, although the artist is unknown. It was given to the church centuries ago, but the date is uncertain.

In the right aisle is the ALTAR OF SANTA TERESITA (the Little Flower), and the CAPILLA DE LA VIRGEN DEL ROSARIO (Chapel of Our Lady of the Rosary). In the crypt

under this Chapel are entombed some of the first priests of San José.

Facing the Sacred Heart Altar, and similar in design is the ALTAR OF THE IMMACULATE CONCEPTION.

In the left aisle is the ALTAR DEDICATED TO THE HOLY FAMILY.

Next is the ALTAR OF THE CRUCIFIXION, on which stands the famous Christ of the Ponces. Juan Ponce de León had ordered a crucifix sent from Spain in 1512, but the vessel carrying it was shipwrecked on the rocks off Cabras Island at the entrance to San Juan harbor, and the vessel and all on board were lost. Soon after the wreck a box was seen floating on the water near El Morro. When it was recovered and opened, Ponce de León's Crucifix was found in it, and after that almost miraculous event it was greatly venerated by the family.

The last is the ALTAR OF SAN ANTONIO; the golden halo on the statue was a votive offering. At one side is a STATUE OF SANTA ROSA DE LIMA, whose relics are on the Altar.

Among the art treasures in this old temple is a large painting by the celebrated Puerto Rican, Francisco Oller—*Las Tinieblas*, which depicts the darkness following the Crucifixion. This hangs high on the wall at the right of the chancel, and at the left is a fine old painting of the Visitation by an unknown artist.

Some of the early Governors of Puerto Rico are buried here—Juan de Céspedes, Juan de Haro, Agustín de Silva y Figueroa, and also Juan García y Ponce de León, grandson of the *Conquistador*.

The church bells, bearing the date 1872, are still in use.

An unusually interesting feature of this Church during the Christmas season is the *Nacimiento*, or representation of the Holy Manger of Bethlehem. This is not the conventional Manger ordinarily seen in Catholic Churches at

Yuletide, but one to delight the heart of every child, and even of grownups. In addition to figures of the Holy Family in the stable, there is an animated little toy town, with all the inhabitants busily pursuing their various occupations, or traveling on the tiny trains which run through the town. It is like a small mechanical toy shop, but to devout Catholics, far from being irreverent or sacrilegious, it rather exemplifies in a lively, happy manner the joy of religion as preached and practiced by St. Francis of Assisi, who originated the custom of the *Nacimiento* in Italy about 300 years before the founding of San José Church.

41. OLD SANTO DOMÍNGO CONVENT. In 1523 the friars, with royal authority from their Catholic Majesties, built the convent and church with funds collected throughout the Island. The work was finished in 1528. The grounds of the garden extended to the east to the present market place. In 1645 the western portion, called *Casa del Noviciado*, was built with funds from the same source. The Dominican Order having been dissolved, the Treasury of Puerto Rico took charge of the Convent in about 1810, calling the house *Casa del Noviciado*. In 1843, the troops having moved out, the *Audiencia* (Supreme Court) occupied the *Casa del Noviciado*, and all the north part of the Convent yard. Afterwards the Military Administration and the Military Academy occupied the eastern and southern part of this same building. On the 12th of May, 1898, it suffered heavy damages from American guns, especially in the part occupied by the *Audiencia*. When the Supreme Court vacated the building the National Guard took it over until it was transferred to the Federal War Department. After having been restored to its original appearance with PRRA funds, the building became in July, 1939, the quarters of the newly created United States War Department of Puerto Rico. The interior open patio with

its enclosing arcades and ausubo balustrades is an outstanding example of colonial Spanish monastic architecture.

L. on Beneficencia St. and straight on El Morro Road.

42. BALLAJA BARRACKS (R) (*open 9-5*), is large enough to house 2,000 troops. The barracks, built between the years 1857 and 1864, form a rectangle with an open patio in the center, spacious enough for a parade and drill grounds. This building, like many in the vicinity, suffered from the bombardment of May 12, 1898, by the American Navy.

Today it is the quarters of the U. S. 65th Infantry of Puerto Rico, which was organized by Major General Guy V. Henry, U. S. Volunteers, and approved by act of Congress, March 2, 1899.

43. The BENEFICENCIA BARRACKS (L) have been turned over to the United States War Department after having been completely renovated with funds of the PRRA. Formerly this immense building was used as an insane asylum and a home for orphans.

44. EL MORRO GROUNDS are perhaps the most beautiful spot in San Juan. The battlefield of a fierce encounter in 1625, this vivid green, rolling field, set off by the blue waters of the Atlantic, is today a parade ground and golf course of the military reservation. Just below the walls is the SANTA ROSA GATE, leading to the MUNICIPAL CEMETERY; to the right the city, crowned by SAN CRISTÓBAL CASTLE; to the left the homes of the officers, overlooking the bay and ISLA DE CABRAS (Goat Island), which for many years was used as a leper colony, and SAN JUAN DE LA CRUZ, popularly called El Cañuelo. Completed in 1610, this small fort at the harbor's entrance served to guard the western shore, and its guns with those of Morro, could subject any ship entering the channel to a heavy crossfire.

45. CASTILLO DE SAN FELIPE DEL MORRO (Morro Castle) (*open 9-5*), for centuries Puerto Rico's chief defense, is one of the most fascinating points of interest on the Island, both historically and architecturally.

La Fortaleza having proved worthless as a defense, the logical site for an adequate fortress was finally selected—El Morro, the rocky headland at the entrance to San Juan harbor. Construction was first started in 1539, and the lower battery and tower, now known as the CARMEN FORTIFICATIONS, were built in 1554 from the plans of Juan de Helí, a Spanish military engineer who designed the Morro Castle in Havana, Cuba. Chroniclers state the work progressed so slowly that Negro slaves brought to Puerto Rico to work on public improvements died of old age.

By 1586, however, construction had progressed sufficiently to install a permanent garrison. After Sir Francis Drake destroyed the city of Santo Domingo (1586) it was feared the English would attack San Juan, and improvements of the fortifications were urged. These were accomplished in 1591. But it was not until November, 1595, that the English fleet, commanded by Sir Francis Drake, finally appeared. After three days of heavy fighting, during which Sir John Hawkins was fatally wounded, the English were repulsed.

Another attack came in June, 1598, when the English under the Earl of Cumberland effected a landing at Escambrón Beach and marched on the city. Governor Mosquera and the inhabitants took refuge in El Morro, then poorly garrisoned. It was heavily bombarded and at length the Spaniards, whose troops had been greatly reduced by an epidemic, were forced to surrender. For the first and only time in its history (until the Americans took possession) Puerto Rico was in the hands of a foreign power. The English held San Juan for 157 days, but as the epidemic proved disastrous to them also, they abandoned it.

After this invasion El Morro was again enlarged and strengthened, part of the cistern and the battery EL MACHO being built in 1559, and the CABALLERO DE AUSTRIA in 1608.

When the Dutch attacked in 1625 they were successful in landing troops at La Marina in San Juan. They set fire to the town, but were not able to capture El Morro. They were finally defeated, and their leader, Captain Bowdoin Hendrick, was dangerously wounded in a hand-to-hand combat with Captain Juan de Amézquita, a native of Puerto Rico. The MONUMENT on the parade grounds, built at the beginning of the nineteenth century, commemorates the valor of this brave captain and the other defenders of the Fort. This is the site of an old chapel where it is thought that mass was first said in Puerto Rico.

Owing to frequent attacks on other West Indian Islands by the Dutch, English, and French, the King of Spain ordered the San Juan defenses strengthened, and from 1776 to 1783, under Colonel Tomás O'Daly, El Morro was so well reconstructed that it appeared impregnable. With this fortification, Fort San Cristóbal and the smaller forts and wall which had been built around the city, San Juan became the most strongly fortified city in the Western Hemisphere, excepting only Cartagena, Colombia.

The last major attempt of the English to take San Juan was in 1797, but this time the city's fortifications and forces were sufficiently strong to resist capture.

The next bombardment of El Morro was by the United States fleet under Admiral Sampson on May 12, 1898. The scars may still be seen on the outer walls. The second part of the lighthouse tower on the southeast bastion, which had been constructed in 1847, was destroyed by the bombardment. The illuminating apparatus, which was saved, was replaced in 1899.

When the first World War was declared a German ship

that was in San Juan harbor tried to escape. After a shot was fired at her from one of the old guns at El Morro, the ancient cannon turned over and disappeared from view. The Germans, thinking a disappearing gun was being fired, decided it was not prudent to flee, and remained in the harbor.

MOTOR TOUR 1—4.3 m.

Río Piedras and Sunoco busses parallel the route.

S.E. on Ponce de León Ave. PR 1.

46. The CASINO OF PUERTO RICO (L) 0 m. (visitors *welcome*) located on the site of the Puerta de Santiago, the land gate of the old city, is a two-story building formed by a central pavilion and two small lateral wings in the same style as the central building. Over the entrance is a portecochère supported by Corinthian columns. The central section is covered by a mansard roof. A staircase of marble with white marble and sienna-colored columns leads to the upper floor. The interior of the ballroom is decorated with festoons in Louis XV style. At the right of the Casino is a one-story building, formerly the bowling alleys of the club, now used by the BUREAU OF MINES OF THE INSULAR DEPARTMENT OF THE INTERIOR (*open daily*). Here are exhibited minerals found in Puerto Rico.

47. JOSÉ JULIÁN ACOSTA GRADE SCHOOL (R) is a typical example of public school buildings in the Island, of modified Spanish style with patio and playgrounds.

48. INDUSTRIAL COMMISSION BUILDING (R) (*open daily*) is a three-story yellow concrete building, housing the Workmen's Compensation Bureau and other offices.

49. The RED CROSS BUILDING (R) (*open daily*) is the headquarters of the Puerto Rican chapter of the American Red Cross. The two-story building, dedicated August 18, 1935, is of plain reinforced-concrete construction. No emphasis was laid on decoration, although there is some

ornamentation of the main door and a stained glass window on the stair landing. In general, the simplicity of the facade harmonizes with the spirit of the association it houses. The building was built by the PRERA under the supervision of Carlos González and his assistant Luis Ferrer. The doors and windows, both outside and inside, are made of mahogany brought from Santo Domingo and furnished by the PRERA. The mahogany used in the construction of the main entrance door from 1503 to 1510 formed the roof of the house of Governor Fray Nicolás de Ovando, founder of various cities in Hispaniola (today Santo Domingo), and the Governor who ordered Don Juan Ponce de León to conquer and settle Puerto Rico. The timber was given by General Rafael Leonidas Trujillo Molina, President of the Dominican Republic, to the Puerto Rican Chapter of the American Red Cross. At each side of the main entrance is a huge pottery jar in which oil was brought from Spain centuries ago.

50. YOUNG MEN'S CHRISTIAN ASSOCIATION (L) is a center of youth activities in San Juan. The club is a three-story gray concrete building with swimming pool, tennis and basket ball courts, gymnasium, and recreation rooms. The Boy Scouts of Puerto Rico make the "Y" their headquarters.

51. PUERTO RICO ATHENEUM (L) (*visitors welcome*) designed and built in 1923 by architect J. Roldán, is a two-story building consisting of a central part which contains the entrance hall and reading room and an upper floor used as an assembly hall and theatre. The lower portion is decorated with mosaics brought from Spain. On the facade a frieze of yellow marble in high relief depicts allegorically the Arts and Sciences. On the walls is a collection of paintings and portraits. Founded in 1876, this center is devoted to the cultivation of letters, science, and the fine arts; poetical contests, conferences, and debates are

held here throughout the year. The *Sociedad Pro-Arte Musical*, which promotes and encourages the composition and appreciation of music, maintains offices here.

52. INSULAR LIBRARY (L) (*open 9-9 workdays*), a gray concrete building, is American Colonial in style, with six massive pillars extending from the wide porch to the roof. On the first floor are reading rooms, receiving desks, book shelves, and the office of the librarian. On the second floor are reserve book shelves, lecture rooms, and office space. Through the efforts of former Governor Arthur Yager, Dr. Manuel Fernández Juncos, and the trustees of the Insular Library, the Carnegie Library Corporation of New York donated the sum of \$100,000, and the building was dedicated on July 27, 1916, as the Carnegie Library. When the Insular Library was dissolved its collection was transferred to the new library, which has more than 50,000 volumes and a large collection of periodicals widely read by both Spanish- and English-speaking persons. The library has a yearly circulation of about 85,900 books, including those issued at the desk, those sent through parcel post, and others circulated through traveling libraries; it also conducts story-telling classes for children.

53. CASA DE ESPAÑA (House of Spain) (*visitors welcome*) (L) the social center of the Spanish colony, possesses one of the most attractive modern buildings in the West Indies. The upper floor is supported around the inner court by a marble colonnade. The entire interior decoration is of native hardwood. Spanish ceramic work and tile imported from Spain were used for decorating. It has an inner court with a modern swimming pool. A reproduction of the Fountain of the Lions in Granada adorns the gardens. On the right wall of the porte-cochère is the Royal Coat-of-Arms which surmounted the Puerta de España, one of the old city gates at Tanca Street. A grand

ballroom, a library, a small art gallery, a bar, etc., add to the social graces of the building.

54. The INSULAR CAPITOL (*open daily*) (L) the seat of the Government and the Island Supreme Court, is an imposing structure designed by the architect of the Insular Department of the Interior in 1925. The design is Renaissance in detail. The ornamentation is handsomely executed in white Georgia marble, used for the entire exterior of the building.

The location, although central, and facing the main avenue leading from the business section of the city to the residential parks and suburbs, detracts from the building. Its long narrow plot, running parallel to the road, gives no opportunity to see the Capitol from a sufficient distance to get an impression of the building as a whole.

The interior treatment is good and the materials for the most part are Italian marbles and travertine, some American Tennessee marble, and white ornamental plaster for ceilings and beams. The approximate size of the structure is about 100 by 330 feet.

55. VICTORY MONUMENT (R), facing the Capitol, an imposing bronze statue on a granite base, the work of Bony MacLeary, honors the Puerto Ricans who lost their lives in the World War.

56. SCHOOL OF TROPICAL MEDICINE (*open daily*) (L) stands on the site of an old building built in 1897 with materials from the Old Customhouse, occupied first by the Municipal Police Headquarters and later turned into a jail. It is a three-story building of pure Spanish Renaissance style, designed in 1924 by A. C. Frulayson. All ornamentation is in polychrome terra-cotta and the floors in terrazzo. The classroom floors are wood covered, and the corridors are finished in terrazzo and tile. It adjoins the Insular Capitol grounds, and to the rear overlooks the brilliantly blue waters of the Atlantic Ocean. In

the south, east, and west sides of the building are the laboratories and office of the school; the north section houses the University Hospital. In the center of the quadrangle is a spacious Spanish patio, adorned with fountains, flowers, and plants.

The University of Puerto Rico and Columbia University of New York work co-operatively in the operation of the School of Tropical Medicine, which was opened in 1926. Columbia University determines the educational policy and makes nominations to the faculty, but in other respects the school is operated as a semi-autonomous unit of the University of Puerto Rico. The research departments include bacteriology, pathology, chemistry, public health and communicable diseases, parasitology, climatology, mycology, and tropical medicine and surgery.

Field work is carried out in all parts of the Island. The School, in co-operation with the International Health Division of the Rockefeller Foundation, campaigns against *uncinariasis* (hookworm), holds malaria demonstrations and gives advice regarding the prevention of disease. Several large sugar factories which have their own clinics and hospitals have offered co-operation in carrying out field studies on infestations prevalent in the sugar cane growing areas.

The University Hospital, a government-owned institution containing 52 beds and an outgoing patient department, is operated by the School as its chief teaching and research clinic. It holds free clinics for the benefit of the poor of the Island. Several hospitals in other towns co-operate with the School in giving clinical instruction.

The primary aim of the School of Tropical Medicine is to supply facilities for studying the cause and prevention of tropical diseases in a tropical environment, and at the same time to record the influence of tropical conditions on diseases in general. This is the first school of its kind to be

established in the Americas, though the need has long been recognized and has been partially met through the organization of departments of tropical medicine in several of the leading medical schools of North and South America. Instruction is given to a limited number of students in the advanced fields of medical science, and facilities for research are extended to qualified investigators.

The School has a library of more than four thousand books and in addition receives more than two hundred journals concerning various branches of tropical medicine and related fields.

The *Puerto Rico Journal of Public Health and Tropical Medicine*, a quarterly publication, is the official organ of the School and of the Insular Department of Health.

57. NATIONAL GUARD HEADQUARTERS (*open daily*) (L) occupied until recently by the U. S. 65th Infantry Service Company, is a two-story concrete building typical of army post construction.

The Puerto Rico National Guard, originally organized for the defense of the country and commanded by the Island's first Governor, Juan Ponce de León, was authorized by royal decree of King Ferdinand of Spain as the *Milicia Puertorriqueña* (Puerto Rico Militia) in the early days of the colonization. It was composed of white males from 18 to 50 years of age, and the officers were required to be of the nobility.

The militia fought side by side with Spanish regulars against the English, Dutch, French, and Colombian invaders. The military reports of the old Spanish Governors are full of citations of its officers; and the deeds of Amézquita, Vizcarrondo, Correa, Botella, Díaz, and the others gave it such a reputation as to merit, on several occasions, the congratulations of the "King of Two Worlds," the King of Spain. The militia was reorganized by General

Alejandro O'Reilly in 1765, who raised its training and discipline to a high standard.

In 1868 the revolt in Lares against the Spanish Government was suppressed by a detachment of the militia before the regulars arrived; but the Spanish Government, in spite of this added proof of the loyalty of the militia, feared a growing sentiment in Puerto Rico against the mother country, and soon after disbanded it, substituting the *Voluntarios*, composed exclusively of Spaniards and their sons. Thus, when the American troops landed in Puerto Rico in 1898, they were opposed both by the regulars and the *Voluntarios*.

During the World War the regular army was sent to Panama, and no trained troops were left on the Island. The work of training 15,000 new men would have been simplified had there been some at least partially trained men available. This prompted the reorganization of the old Puerto Rican militia as the First Puerto Rico Infantry of the National Guard.

The Guard has been mobilized three times, for the hurricanes of 1928 and 1932 and during the Nationalist agitation of 1937. In addition it has rendered services in various towns on occasions of fires and floods.

In the campaign against illiteracy the Guard has proved a great help. A few years ago one of the officers, Major Balasquide, offered a cup to the company which could teach the greatest number of civilians to read and write during the year. Company F, 295th Infantry, won the cup, having taught 196 citizens to read and write; the total number taught by the Guard was 2,415.

58. BAPTIST MISSION CHURCH (R) is a tile-roofed rotunda-shaped building with an arched corridor leading to the Sunday school rooms.

59. UNITED STATES WEATHER BUREAU (L) 0.5 m. (*open daily*) is an attractive two-story square gray

concrete building with Spanish tile roof. On the lower floor are the offices and equipment, and on the upper the living quarters of the meteorologist in charge of the Bureau. During the hurricane season (July-October) daily weather reports are given over the radio. The Bureau was established for the purpose of collecting and disseminating climatological and meteorological information, publishing weather predictions and special advice regarding storms. It also pursues scientific investigations of weather and climate. There are 72 stations in Puerto Rico.

60. JOSÉ CELSO BARBOSA GRADE SCHOOL (L) was named after one of Puerto Rico's most prominent citizens.

61. ASILO DE ANCIANOS (*visitors welcome*) (L) is a large building of solid construction, surrounded by a high concrete wall. The institution is conducted by the Sisters of Charity to care for the aged poor over 60 years and not suffering from mental or contagious diseases. The capacity is 129 inmates.

62. ST. AUGUSTINE CHURCH, SCHOOL, and CONVENT (L) one of the largest private institutions in the Island, was founded in 1915 by the American Province of the Redemptorist Fathers. The Parochial School is conducted by the Sisters of Notre Dame, giving free instruction to more than 600 poor children of the Puerta de Tierra section. Services for English-speaking people are held at the church every Sunday at 11 a.m.

63. NOTRE DAME INDUSTRIAL SCHOOL (*open daily*), (R) conducted by the Sisters of Notre Dame, was founded by Father Carlos S. Hoff in 1917; the present quarters were built in 1929. The institution provides free instruction in needlecraft for women and girls. Visitors are given an opportunity to watch the workers; and there is a large display room where articles made at the school are sold.

64. ST. LUKE'S PROTESTANT EPISCOPAL CHURCH (R) one of the oldest non-Catholic churches in the city, is a small frame structure. In the basement is a kindergarten for poor children.

65. MARTIN BRUMBAUGH GRADE SCHOOL (L) one of the earliest school buildings built in the metropolitan area, was named after the first commissioner of education in Puerto Rico under the American regime, who later became Governor of Pennsylvania.

66. The UNITED STATES NAVAL RADIO STATION (L) 1 m. (*open 9-5*) is maintained for the purpose of communicating with ships at sea. Lights from the two lofty towers can be seen for miles.

67. MUÑOZ RIVERA PARK (L) is one of the garden spots of the West Indies, designed by Don Francisco Valines Cofresí, Park Director. Among the many attractions are two pools filled with the exotic lotus and other water lilies; a hedge trimmed in the form of a guitar; another hedge trimmed to form the name "Luis Muñoz Rivera"; vine-covered paths; numerous benches; a great variety of tropical plants, flowers and trees; and a splendid view of the Atlantic Ocean and white breakers dashing against the rocks. There are no drives through the park, but there is ample parking space for cars, and a walking tour is well worth while.

Near the entrance is an old POLVORÍN, built during the sixteenth century to store powder for nearby Fort San Gerónimo. It is so low because during the time of frequent attacks by invaders all buildings outside the city walls were unprotected, and the lower the buildings the safer they were. The Polvorín is now used as a Museum of Natural History, and contains minerals found in the Island, archeological specimens, stuffed birds, animals, and fish. Outside are cages of live animals, birds, and reptiles. The building is surrounded by a profusion of trees and flowering

shrubs. Adjoining the museum are the offices of the Park Commission landscape architects. Besides the caged birds there are innumerable pigeons, ducks, and a large family of peacocks, these aristocratic birds roaming about unmolested.

In the park are kiosks, where lunch and refreshments are served at tables under the trees.

68. The BRITISH CONSULATE (*open 9-5*) (R) is on the second floor of the Shell Bldg. Adjoining are the tanks of the Shell Oil Co.

69. The PORTO RICAN AMERICAN TOBACCO COMPANY (R) (*closed*) has two large buildings used for the manufacture of native cigars and cigarettes. The older building, constructed in 1885 by the Municipal Government, was intended for a hospital but never used as such; instead it was turned into an Insular jail in exchange for which the city of San Juan could use the prisoners as street cleaners. In 1903, under the administration of Mayor Roberto H. Todd, who had become dissatisfied with the poor job done by the prisoners in keeping the city clean, the Insular Government was asked to pay \$1,000 yearly rental. In 1906 the building was sold at public auction to the Porto Rican American Tobacco Co. for \$85,000 and the money used for the construction of the Municipal Hospital on De Diego Ave. in Santurce.

70. The COBIÁN FILM CENTER (R) is a new two-story modern style building containing offices of some of the motion picture companies represented in the Island.

71. TEMPLO DEL MAESTRO (*open daily*) (R) is the home of the Puerto Rico Teachers' Association. The society promotes friendship among its associates; adopts plans and ideas for the improvement of Puerto Rico's educational system; looks after the economic condition of teachers; and brings into closer relations the teacher, the child, and the home.

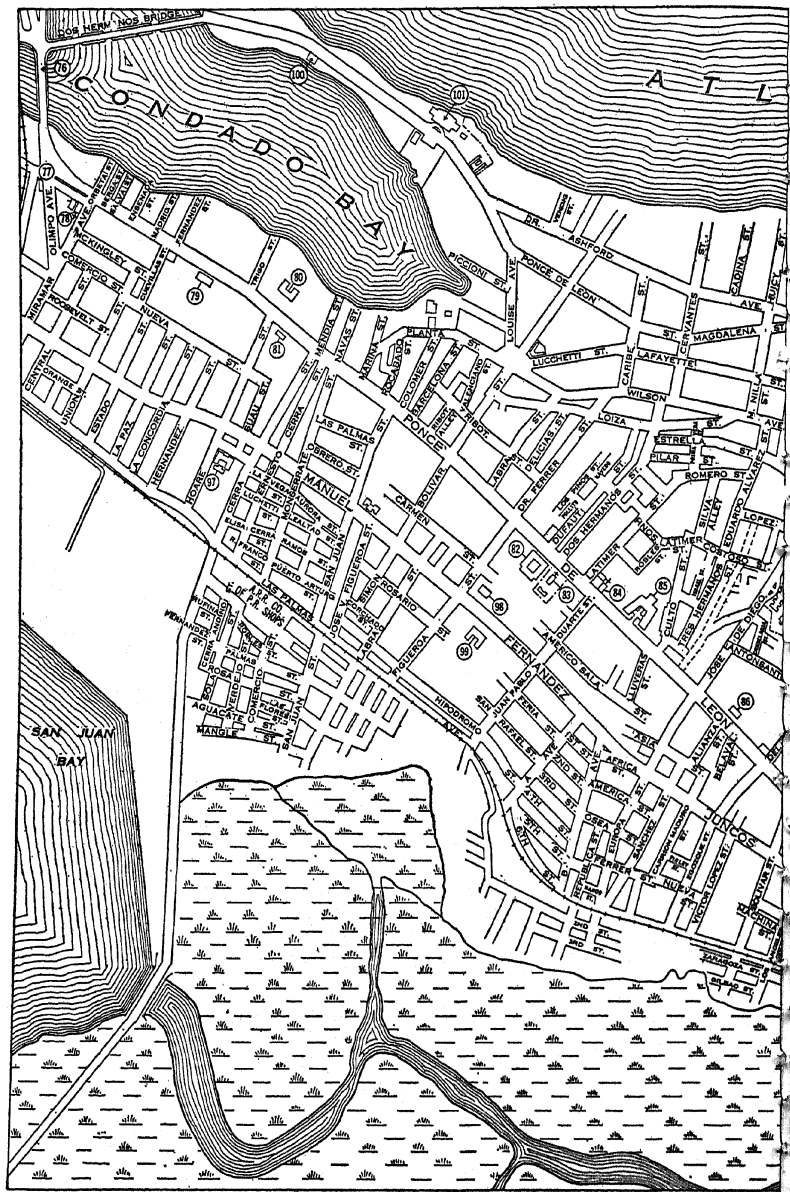
72. The PUERTO RICO RECONSTRUCTION ADMINISTRATION (L) 1.3 m. (*open 8-4:30*) situated at the eastern end of Muñoz Rivera Park, is housed in fifteen wooden buildings. In May, 1935, the President set up an agency, designated as the Puerto Rico Reconstruction Administration, along the lines recommended to him in the Report of the Puerto Rico Policy Commission; this Commission had been called to Washington to formulate a program for the rehabilitation of the Island. Locally known as "la PRRA," its main purpose has been the carrying out of a comprehensive program which not only takes care of the immediate problems by affording widespread employment but that tends mainly toward a fundamental correction of the economic and social evils besetting the Island and its people.

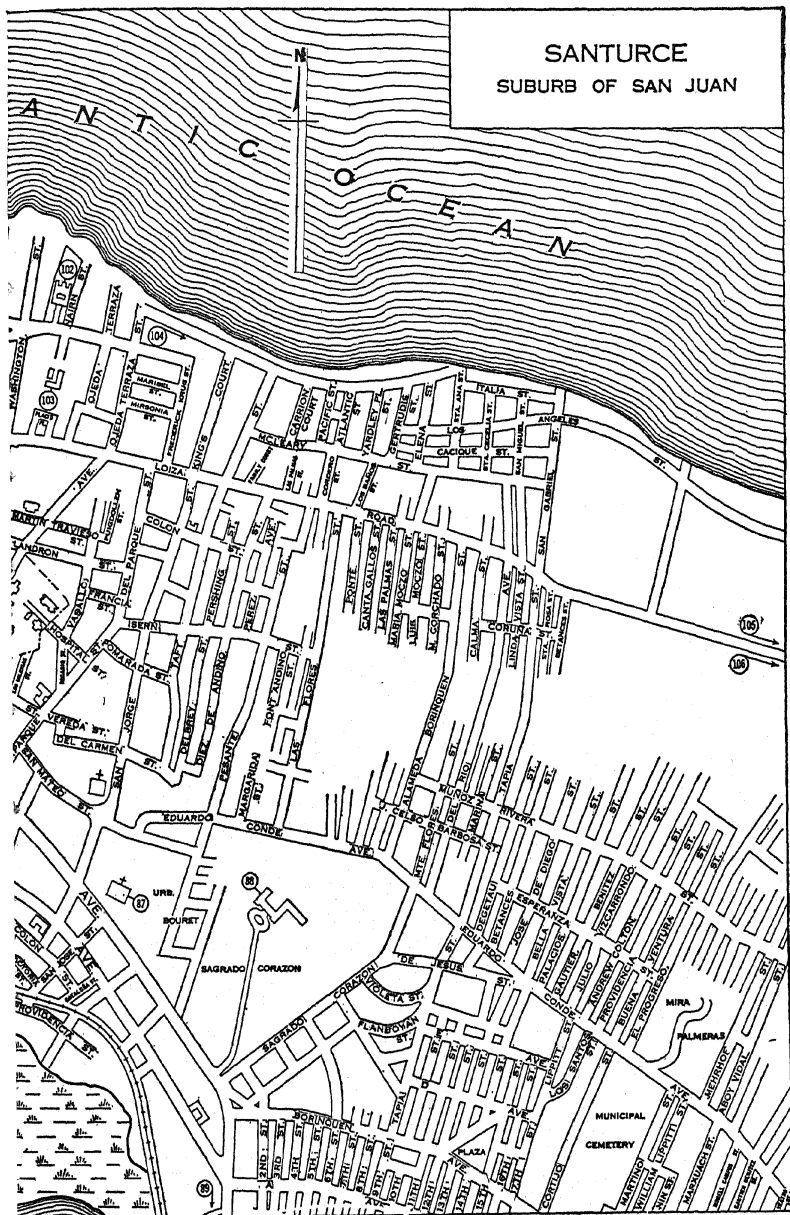
L. on Escambrón Beach Road.

73. SIXTO ESCOBAR ATHLETIC PARK (L), 0.3 m., overlooking the Atlantic Ocean, was named after the bantam-weight boxing champion of the world. In construction

POINTS OF INTEREST—SANTURCE

- | | |
|--|--|
| 77. Union Club | 88. Sacred Heart College |
| 78. Union Church | 89. Martín Peña Bridge |
| 79. Knights of Columbus Club | 97. Rafael Cordero Grade School |
| 80. Insular Home for Girls | 98. Medical Association of Puerto Rico |
| 81. Colegio Puertorriqueño de Niñas | 99. Institute for the Blind |
| 82. Insular Department of Health | 100. Elks Lodge |
| 83. Sacred Heart Church | 101. Condado Hotel |
| 84. St. John's Protestant Episcopal Church | 102. Presbyterian Hospital |
| 85. Central High School | 103. St. John's School |
| 86. Blanche Kellogg Institute | 104. Borinquen Park |
| 87. Inmaculada School | 105. Isla Verde |
| | 106. Boca de Cangrejos |





similar to the bull-fight arenas of Spain, it has a seating capacity of 40,000.

74. The ESCAMBRÓN BEACH CLUB (R) (*hotel service*) is one of the finest amusement places in the West Indies. The 12-acre swimming pool, a natural cove protected by an iron screen from sharks, has a fine sandy beach. There are semi-detached rooms, a large dance hall, a restaurant, bar and casino.

Retrace Ponce de León Ave.

75. SAN GERÓNIMO CASTLE (*private*) (L on a private road) finished about 1771, played an important part when the English besieged San Juan in 1797. The Spaniards, to prevent boats from landing at that point, by a tremendous explosion formed the picturesque barrier of rocks seen today running parallel with the Dos Hermanos Bridge. For the bombardment of San Gerónimo the English placed their guns on the present site of the Condado Hotel. There is a legend that during this siege the closely pressed inhabitants, led by their brave bishop, formed a mighty procession to ask aid of St. Ursula and her Eleven Thousand Virgins. Every man, woman and child bore a lighted taper, and as they marched singing through the streets all the church bells gave them a lusty accompaniment. The English, sitting before the bridge of San Antonio, were amazed by all the light and movement in the beleaguered city, and believing that reinforcements had somehow reached San Juan from the Island, abandoned what was becoming a difficult siege. Part of the San Gerónimo tract, including the castle, was leased on December 15, 1919, to Lieutenant Commander Virgil Baker, U. S. N. retired, for a period of five years. On July 16, 1921, the lease was extended for 999 years, and its validity was upheld by the Supreme Court of the United States.

At 1.7 m. is the intersection of San Antonio and Dos Hermanos Bridges leading to Miramar and Condado suburbs respectively.

76. The SAN ANTONIO BRIDGE was originally of wooden construction; built early in the sixteenth century, it was then known as *Puente de los Soldados* and *Puente del Agua*. The present handsome concrete structure was erected in 1926. A tablet on the left pillar at the entrance of the bridge reads, "In 1598 the Officer of the Militia, don Bernabé de Serralta, withstood heroically at this bridge an English invasion commanded by the Earl of Cumberland."

MIRAMAR, situated on a hill commanding a magnificent view of San Juan Bay, is exclusively a residential section, with attractive old homes and huge trees.

77. The UNION CLUB (R) 1.9 m. Stop 10 (*restaurant open*) is popular among the American colony.

78. The UNION CHURCH (R) Stop 11, organized by Presbyterian and Methodist continentals in 1916, is a small Gothic style structure. Services are in English only.

79. The KNIGHTS OF COLUMBUS CLUB (R) Stop 12 (*visitors welcome*) is a Southern colonial house with a long veranda along the front. The garden forms the emblem of the order. The Catholic Daughters of America hold meetings here also.

80. The INSULAR HOME FOR GIRLS (L) 2.3 m. Stop 15 (*open 9-5*) under the Department of Health, is a charity institution for orphan girls between the ages of 7 and 12. The large, handsome, rose-painted building, a heritage of the Spanish regime, has a capacity of 300.

81. COLEGIO PUERTORRIQUEÑO DE NIÑAS (R), Stop 15, is a private non-sectarian day school for girls, established in 1913. The institution moved into its present three-story modern structure in 1930. It has an enrollment of over 300, and the faculty is entirely Puerto Rican.

82. The INSULAR DEPARTMENT OF HEALTH (R) 2.9 *m.* Stop 19 (*open 9-4*) moved in 1937 into its present quarters, which since 1899 had been occupied by the Insular Home for Orphan Boys. Originally built for the Civil Institute of Secondary Education, the structure is of the same style as the Insular Home for Girls. The inner patio, a reproduction of the Patio of Lions of La Giralda in Seville, was built by the orphans.

83. SACRED HEART CHURCH (R), Stop 19, adjoining the Department of Health, is an austere structure of Spanish Colonial style. The parish is the wealthiest in the metropolitan area.

84. ST. JOHN'S PROTESTANT EPISCOPAL CHURCH (L), Stop 20, is a Spanish Mission style edifice with a tower of Moslem design. The interior is Gothic. Originally occupying St. John's Church in San Juan, the congregation moved to its present site in 1931. In the chapel to the left is the marble altar of the old church. Three Sunday services are held, one each for continental Americans, Puerto Ricans, and Negro Virgin Islanders. Part of the purchase price of the land was given from the estate of Sally M. Dooley of Richmond, Virginia. This church is presided over by the Protestant Episcopal Bishop in Puerto Rico.

85. The CENTRAL HIGH SCHOOL (L) Stop 21, the largest in the Island, has 52 rooms, auditorium, gymnasium, lunch room, and library.

86. BLANCHE KELLOGG INSTITUTE (L), 3.3 *m.* Stop 23, a boarding high school for girls maintained by the American Missionary Association, was opened in 1899 and the first of its present buildings was constructed in 1907. The land was donated by George K. Kellogg, a florist of Missouri, as a memorial to his young daughter.

87. The INMACULADA SCHOOL (L) Stop 26, is under the management of the Sisters of Charity, who estab-

lished it in 1913. The interior of the chapel is one of the outstanding examples of Gothic-style architecture in Puerto Rico, the beautiful gilded main altar and furnishings harmonizing with the style. In June an embroidery exhibition is held of work done by the girls.

88. SACRED HEART COLLEGE (L) Stop 26½. A concrete wall marks the boundary of the extensive grounds of the College and Academy. The large, convent-style building is set far back from the road on a hill that overlooks Río Piedras. The institution, founded in 1879, is conducted by Mesdames of the Sacred Heart.

89. MARTIN PEÑA BRIDGE, 4.3 m., marks the spot where the Spaniards defeated the English on April 21, 1797. The bridge, erected in 1846, is the dividing line between the municipalities of San Juan and Río Piedras. To the left is a settlement of houses built over the water. On the south side of the bridge is Hato Rey, a suburb of Río Piedras. Formerly this area was devoted to the dairy industry; today it has been divided into estates and residential lots. Along the road there are cultivated flower gardens with their *Se Venden Flores* (flowers for sale) signs.

MOTOR TOUR 2—3.5 m.

S.E. on Malecón into Fernández Juncos Ave. (Carretera Nueva)

90. The OCHOA BUILDING, 0 m., corner Tanca St. and Malecón, is a five-story structure housing several governmental and commercial offices. On the ground floor are the agencies of R.C.A. Communications, Inc., and the West India and Panama Telegraph Co. The Puerto Rico Bar Association has its offices here.

91. The WATER FRONT is the heart of the Island's industrial and commercial activities. Vessels from all over the world dock here.

92. The FALANSTERIO, 1.3 *m.* NE. corner San Juan Bautista St., is a housing project of the PRRA built to provide adequate living conditions for part of the residents of Miranda slum, as part of the PRRA slum-clearance program. Covering a three-acre tract of land, the apartment building, which cost approximately \$600,000, is of reinforced concrete, fireproof throughout, and designed in modern style. The project consists of 18 three-story units with a total of 216 apartments, and a two-story nursery building. Each apartment consists of a living and dining room, two bed-rooms, kitchen, bathroom equipped with modern sanitary plumbing fixtures, electric lighting, and gas range. The different units are grouped, forming a quadrangle, with children's playgrounds and grass plots in the enclosed area. It was officially dedicated on November 7, 1937.

93. The MUNICIPAL JAIL (L) is a concrete building of modern construction, opened in 1938.

94. SAN JUAN YACHT CLUB 2 *m.* (R) at the entrance of Guillermo Esteves Bridge over the San Antonio Channel, is the headquarters of the Island's amateur seamen. It sponsors social and recreational activities.

The GUILLERMO ESTEVES BRIDGE, built in 1923 when Fernández Juncos Avenue was opened for traffic, runs through the southern section of Santurce, and was named after the first Puerto Rican Commissioner of the Interior.

95. ISLA GRANDE AIRPORT, fifteen minutes' drive from the center of San Juan, is an excellent base for land planes and a marine base for the Pan-American flying boats.

96. INDEPENDENT FILM CENTER (L) opposite Isla Grande Road, is the home of Warner Brothers Pictures.

97. RAFAEL CORDERO GRADE SCHOOL (R) Stop 14, is of modified colonial style.

98. The MEDICAL ASSOCIATION OF PUERTO RICO 3.3 m. (L) Stop 19, is affiliated with the National Organization and has seven divisions, one for each insular district. It has a library and an official organ, the *Boletín de la Asociación Médica de Puerto Rico*. Here are also the offices of the Pan-American Medical Association.

99. The INSTITUTE FOR THE BLIND (R) Stop 19, is maintained by the Insular Department of Health to teach the blind to become self-supporting citizens. It has a capacity for 50 inmates.

MOTOR TOUR 3—7.5 m.

N. Across Dos Hermanos Bridge 0 m. on Dr. Ashford (Nereidas) Ave.

The Condado section was bought in the early 1900's by the Behn Brothers for a real estate development, and today is a suburb of fine residences, gardens, and shaded streets, bordering the Atlantic Ocean.

100. ELKS LODGE (R), 0.6 m., Stop 55 (*visitors welcome*) is the scene of many social affairs.

101. The CONDADO HOTEL (L), 0.8 m., Stop 53, one of the leading hotels in the West Indies, with its recreational facilities and its garden-by-the-sea, affords modern comfort to about 100 guests.

102. The PRESBYTERIAN HOSPITAL, N. corner Nairn St., 1.6 m., Stop 46, is a general non-sectarian hospital founded in 1916, with facilities for part-pay patients; it maintains a nurses' training school.

103. ST. JOHN'S SCHOOL, S. corner Nairn St., Stop 46, is a Protestant Episcopal private school. The curriculum is entirely in English.

104. BORINQUEN PARK, N. corner de Diego Ave., was formerly a popular beach resort, but the 1928 hurricane caused great damage to it.

R. on de Diego Ave., then L. on Loíza St. to Carolina Road.

105. ISLA VERDE (L), 5.4 m., is one of the favorite bathing places for residents of San Juan and vicinity. A residential district now gives way to acres of coconut groves, among which are the thatched or iron-roofed huts of the *agregados* (caretakers).

106. BOCA DE CANGREJOS, 7.5 m., is a delightful picnic resort, with good bathing and fishing. There are bath-houses, boats, fishing equipment for rent, glass-bottomed excursions boats, diving helmets for amateurs, and a rifle range. This is a picturesque mangrove-lined bay, set off by palm trees and protected from the open ocean by a chain of coral reefs. Within the clear blue waters of the cove is an enchanting submarine panorama—profound sea caverns, submerged craters, brilliantly festooned in coral, and myriads of vari-colored tropical fish, fantastic crustaceans, and starfish. Facilities are at hand for visitors to put on bathing suits, descend, and explore this garden. A metal diver's helmet, placed over the diver's shoulders, assists in the descent and allows the thrill seeker to prowling around the sea bottom among multicolored fish, coral formations, and swaying sea fans. Every precaution has been taken to insure the safety of the amateur diver, and an iron screen at the mouth of the bay prevents the entrance of dangerous fish.

Ponce

<i>Railroad Stations:</i>	Campeche St.; Real and Bonaire Sts.; Sal-sipuedes St., Ponce Playa. (American Rail-road Co.)
<i>Bus Stations:</i>	Atlas Line, 5 Villa St.; Blue Line, Villa and Méndez Vigo Sts.
<i>Airport:</i>	Serrallés' Airport, 3.9 m. from city; Central Mercedita (privately owned).
<i>Taxis:</i>	Fare according to distances and passengers.
<i>Horse-Drawn Coaches:</i>	Fare according to distances and passengers.
<i>Piers:</i>	Municipal Piers, Ponce Playa, 3.7 m. from city.
<i>Traffic Regulations:</i>	(See General Information.)
<i>Accommodations:</i>	Hotels, boarding houses, and furnished apart-ments at moderate prices.
<i>Information Service:</i>	Police Station, Molina St.; Chamber of Com-merce, 5 Star St.
<i>Motion Pictures Houses:</i>	Eight.
<i>Athletic Field:</i>	Camp Terry, within city limits.
<i>Swimming:</i>	Public beaches: Ponce Playa, Las Marías, Los Meros, Las Cucharas, all near city.
<i>Annual Events:</i>	October 12th, Our Lady of Guadalupe (Pa-tron Saint), games, fireworks, yacht races, and dances (see <i>Calendar of Events</i>).

PONCE (53 alt., 65,179 pop.), known as *La Perla del Sur* (Pearl of the South), is the second city of Puerto Rico and

the largest on the southern coast. Since 1920 the population has increased about 16,000.

Located on an extensive coastal plain, mostly under sugar cultivation, connected by the American Railway and five highways with the rest of the Island, and with a fine harbor and excellent port facilities, Ponce is industrially and commercially one of the foremost cities of Puerto Rico. It is the shipping point for a large proportion of the sugar produced on the Island, and about 40 per cent of all the coffee exported from Puerto Rico.

The city is not well situated because of its exposure to occasional floods from the Portugués River; but the climate is pleasant, and so favorable to plant growth that orchid-like air plants festoon telegraph and telephone wires. Scarcely a patio, balcony, or garden can be found that is not gorgeous with tropical flowers, blooming shrubs, vines, and palms.

In addition to the fine residential sections, Ponce has garden-like plazas or parks, several banks, first class hotels, restaurants, theaters, modern stores, a large public market, in fact everything that goes to make up a prosperous, growing city.

Ponce is the seat of the fifth senatorial district of Puerto Rico, which includes the municipalities of Ponce, Adjuntas, Coamo, Jayuya, Juana Díaz, Orocovi, Santa Isabel, and Villalba. It is also the seat of the Federal District Court for the southern region of Puerto Rico.

Whereas most Puerto Rican cities have one central plaza, Ponce has two, separated by a broad esplanade leading to the Cathedral. The streets are wide, and the general appearance and atmosphere is reminiscent of South American cities. Although several fine modern buildings surround the two principal plazas, the predominating architecture is Spanish, most of the houses being of one story, with wide verandas.

Ponce is also different from any other place in Puerto Rico in another respect—the use of the *coche* (horse-drawn carriage). Along one side of the Plaza, in the very heart of the city, are several ancient one-horse *coches* with the old *cochero* (coachman) sitting in state on the box, awaiting patiently the arrival of a fare. Usually he does not have long to wait, especially in the evenings, when it is quite the thing for modern *caballeros* to go merry-making in the style of their ancestors.

In the city little evidence of ocean commerce is visible, for the shore front and docks are 3.7 miles distant, at Ponce Playa. Here is a modern, twin-deck municipal pier where even the largest ships can dock; large warehouses, and the Playa railroad station. Many of the Island's exports and imports to and from the United States and South America go through the port of Ponce.

The industries are varied. There are alcohol distilleries; plants for the manufacture of rum, candy, crackers, soup paste, bay rum, and hats; large handkerchief and needlework factories; coffee-roasting plants; plants for canning fruits; foundries, and others.

The suburbs are distinctive. One of the most picturesque is El Vigía, a park-like development of magnificent residences built on the high hill to the West. Near the Club Deportivo is the fashionable Alhambra section. Running through the Oliver suburb is Hostos Avenue, which leads to the Marina. This wide avenue is named in honor of Eugenio María de Hostos, the great Puerto Rican writer and educator. Mariani and Bélgica, with their pretty homes and gardens, are also attractive suburbs, as well as Buenos Aires and Parque Miramar at Ponce Playa.

La Perla del Sur has long been a cultural center, counting among its residents many men prominent in the fields of music, literature, journalism, education, and political

affairs. In 1870 Alejandro Tapia y Rivera (*see San Juan*) formed the Reading Cabinet of Ponce, and in 1890 the Municipal Library was organized, with the books of the Cabinet, the private collection of Don Miguel Rosich, and other volumes either donated or purchased, as a nucleus. The first newspaper, *El Ponceño*, established by Daniel Rivera, was the outlet for the literary efforts of local writers and poets of that period.

The Cradle of Liberty is another name sometimes given Ponce, which even before it gained the rank of a city had become a stronghold of native liberalism. Some of the Island's political trends, and a number of sensational military, political, and labor events are recorded in its history. It was here that Luis Muñoz Rivera founded *La Democracia*, and the city has remained a storm-center of Island politics.

Two of the Island's outstanding composers, Tavárez and Morell Campos, are closely associated with the musical development of the city. Manuel G. Tavárez (1843-83) was born in San Juan. At the age of 15 he showed such musical aptitude that he was sent to the Paris Conservatory by the Economic Society of Friends of the Country. There he distinguished himself greatly. An illness deprived him of his hearing and the partial use of his left hand, and he returned to Puerto Rico, passing his later years at Ponce, teaching the piano. He had many disciples among young musicians of Ponce, and left a number of musical compositions.

Ponce has an extensive rural zone, and is one of the largest Island markets for fruits of the country. The principal agricultural industry is the production of sugar, and one of the largest *centrales* of the Island is located here, the Centrale Mercedita, where most of the sugar exported from Puerto Rico is refined.

Excellent educational facilities are provided, including a

high school and 21 grammar schools, a Catholic school for boys, two private schools for girls, 47 rural schools, and one second unit school.

Among the public and private hospitals are the Municipal, District, Tuberculosis, Women's, St. Luke's, the Clínica of Dr. Pila, and the Blind Asylum.

Charitable institutions are numerous. The Boy's Orphan Asylum and Old People's Home are maintained by Catholic organizations: the Refuge for Mendicants by the Children's Welfare Society, the Reform School for Delinquent Girls by the Insular Government, and the Children's Shelter by the Masonic Lodge.

The most important social centers are the Club Deportivo, Centro Español, Casino de Ponce, Centro de Dependientes, Club Juan Morell Campos; as well as the fraternal and civic organizations—Knights of Columbus, Odd Fellows, Masons, Rotary Club and Lions' Club. More than 75 per cent of the citizens attend religious services afforded by the Cathedral and 14 churches of different sects in the urban zone, and 20 chapels in the rural districts.

Considering the progress made by this enterprising city, its extensive commerce and industries, one would expect to find crowded, bustling streets. On the contrary, Ponce is quiet and leisurely, in contrast to the noisy streets of San Juan. And the Ponceños, though courteous to strangers, keep very much to themselves.

POINTS OF INTEREST

FOOT TOUR—2.5 m.

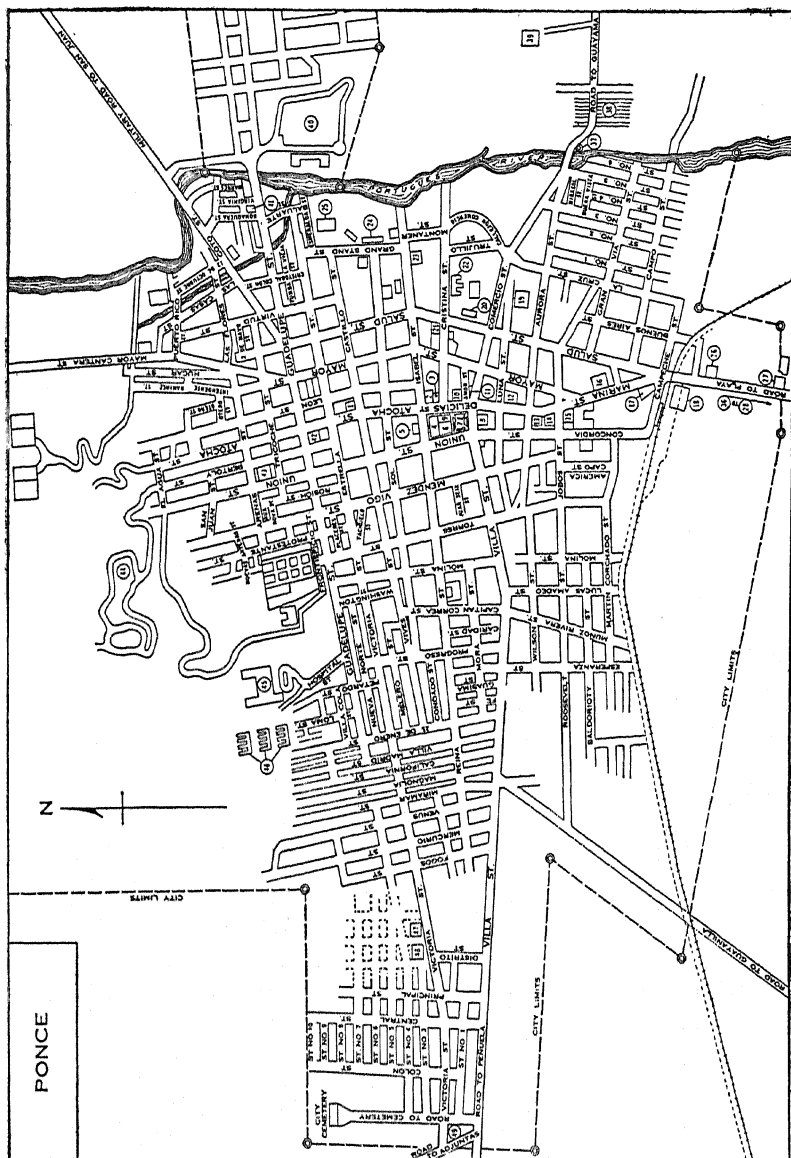
1. The MARKET (*open daily*), N. corner Atocha and Castillo Sts., built in 1863 and reconstructed in 1904, is now being demolished to make room for a new modern market now under construction with PWA funds.

Straight into Delicias St.

2. The ROYAL BANK OF CANADA (L), is housed in a two-story concrete building of Spanish Renaissance style.
3. The NATIONAL CITY BANK (L), occupies the main floor of an office building.

POINTS OF INTEREST—PONCE

- | | |
|--------------------------------|--------------------------------|
| 1. Market | 28. Ruiz Belvis and Santiago |
| 2. Royal Bank of Canada | Grade Schools |
| 3. National City Bank | 29. Baptist Church |
| 4. Muñoz Rivera Plaza | 30. Sanctuary Methodist Epis- |
| 5. Fox Delicias Theater | copal Church |
| 6. Cathedral of La Guadalupe | 31. Puerto Rico Iron Works |
| 7. Degetau Plaza | 32. Our Lady of Mount Carmel |
| 8. La Alcaldía | Roman Catholic Church |
| 9. El Parque de Bombas | 33. Plaza |
| 10. Crédito y Ahorro Ponceño | 34. Site of Ponce Fort |
| 11. El Banco de Ponce | 35. U. S. Customhouse |
| 12. Casino de Ponce | 36. Municipal Pier |
| 13. Bishop Willinger Nurses' | 37. La Ceiba de Ponce |
| School | 38. Cuatro Calles |
| 14. Asilo de Damas | 39. Central Mercedita |
| 15. Holy Trinity Episcopal | 40. El Club Deportivo de Ponce |
| Church | 41. La Milagrosa Roman Catho- |
| 16. Parque de La Abolición | lic Church |
| 17. Asilo de Huérfanos | 42. Post Office and Federal |
| 18. Railroad Station | Court Building |
| 19. Colegio Ponceño of Varones | 43. Tricoche Hospital |
| 20. McKinley Public Grade | 44. El Vigía |
| School | 45. St. Luke's Memorial Hos- |
| 21. Liceo Ponceño | pital |
| 22. Ponce High School | 46. Tuberculosis Hospital |
| 23. Academy of the Sacred | 47. Little Flower Convent and |
| Heart | Church |
| 24. Athletic Field | 48. District Hospital |
| 25. District Court | 49. Juan Morell Campos Devel- |
| 26. Asilo de Huérfanas | opment |
| 27. Ponce Electric Co. | |



Right on Isabel St.

4. MUÑOZ RIVERA PLAZA (L), formerly Plaza Delicias, is a long esplanade with two fountains at each end. The inner section is bordered by handsome specimens of royal palms, and the outside walk is lined with large pink laurel trees. On the north side is a monumental BRONZE STATUE OF LUIS MUÑOZ RIVERA set on a marble pedestal.
5. FOX DELICIAS THEATER (R), facing the Plaza, is one of the most striking buildings of its kind in the West Indies. Designed by Francisco Porrata-Doria in 1931, the building is a happy combination of Romanesque and modern forms. The theater stands back from the street and is approached from an enclosed patio reminiscent of the ancient Roman atrium, embowered with tropical plants and trees.

Left on Union St.

6. The CATHEDRAL OF LA GUADALUPE (L), dividing the Plazas, is an attractive building typical of Spanish churches in Latin America, though the towers show French influence. The present edifice was consecrated in 1839. When Ponce was founded a small crude temple was built here which was destroyed by an earthquake in 1740. Another church was erected, which had to be abandoned in 1820 because of its ruinous state. The interior of the present structure is a combination of Renaissance and Gothic architecture, and the altars and chapels conform to these styles. Over the main altar is a painting of the Virgin of Guadalupe as she appeared to an Indian in Mexico. The Stations of the Cross and the picture of the Virgin over the Altar of Our Lady of Perpetual Help are by Miguel Pou. The Chapel of La Purisima has a gilded altar. On the right is the little Chapel of the Blessed Sacrament, which has an entrance on Degetau Plaza.

7. DEGETAU PLAZA (L) of the Cathedral, is shaded by pink laurel trees. Federico Degetau y González (1852-1914), born in Ponce, studied in Spain, where he soon showed signs of literary talent. He was sent to Paris as a delegate of the Spanish Masons to the International League Against Capital Punishment. He was also a delegate of the Academy of Anthropological Sciences, presiding over the division of Moral and Political Sciences. He founded a newspaper in Madrid, *The Island of Puerto Rico*, to combat Spanish oppression in the Island, and in 1897 was elected deputy to the Spanish Cortes from Puerto Rico. In 1900 he became the first Resident Commissioner of Puerto Rico in Washington. He published a number of works of fiction in Spain.

At the north side of the plaza is a MONUMENT TO JUAN MORELL CAMPOS. The statue, of Italian marble, is the work of Luigi Tomassi, an Italian sculptor, and was made possible by popular subscription. Juan Morell Campos (1857-96), born in Ponce, was a well-known composer of classical and popular music. His *danzas* have never been surpassed as interpretations of the traditional music of Puerto Rico (*see Music*).

8. LA ALCALDÍA (City Hall) (R), Comercio St. facing Degetau Plaza, is a two-story colonial building of Renaissance character. Standing between two other buildings, the City Hall receives light from the street and from a patio which is formed by its U-shaped plan. The rusticated first story contains the main entrance which is flanked by pilasters supporting a small overhanging balcony. Each door or window opening has a small cornice, and the facade is topped by a large delicate cornice running the full length of the building. On the ground floor (L) is the MUNICIPAL LIBRARY, and to the R. are the local offices of the INSULAR INTERNAL REVENUE BUREAU. The upper floor is occupied by the mayor's chambers and municipal

offices. Prior to the erection of the City Hall in 1843, the Hermitage of San Antonio Abad stood here. This chapel, founded in 1708, served as parish church while the Cathedral was being reconstructed. It was demolished in 1841.

9. EL PARQUE DE BOMBAS, at the rear of the Cathedral, facing Delicias St., is the gaudy frame fire station of Ponce, constructed in 1883.

10. The CRÉDITO Y AHORRO PONCEÑO (L), corner Amor and Delicias Sts., is a handsome building erected in 1920 at a cost of \$100,000. French Renaissance in style, the facades are ornamented with delicately carved stone. A granite base six feet high supports fine Corinthian columns and pilasters two stories high, topped by a rich entablature with three pediments and enriched cartouches. The banking room has a high wainscot of white marble with pink cap and base. The institution was organized in 1895 and has branches in several communities of the southern and western sections of the Island.

11. EL BANCO DE PONCE (L), founded in 1917, is Italian Renaissance in style, with tall engaged Corinthian columns and pilasters forming the facades on three streets. A graceful entablature and cornice are located at the third floor level, and a high ornamented attic tops the building. On the top floor is EL CENTRO ESPAÑOL (*private*) organized in 1906, the club of the Spanish Colony.

From Delicias St. into Marina St.

12. CASINO DE PONCE (L), corner Luna St., the oldest social club of the city, a simple two-story Renaissance building. The facades are featured by small projecting balconies and delicately ornamented cornices and pediments. The large and handsome ball room is decorated with festoons.

13. BISHOP WILLINGER NURSES' SCHOOL (R)

occupies a building which was once a fine residence. The School was founded by the present Catholic Bishop of the Southern Diocese of Puerto Rico.

14. The ASILO DE DAMAS (R), corner Jobos St., a women's hospital founded in November, 1863, is under the supervision of the Servants of Mary, a Roman Catholic religious order. The large two-story main building together with the smaller buildings and grounds are enclosed by an iron fence. The HOSPITAL CHAPEL, of modern construction, is in Romanesque style.

15. The HOLY TRINITY EPISCOPAL CHURCH, (L), Parque Abolición, the first non-Catholic place of worship to be erected in the Spanish Dominions, was consecrated in August, 1873, pursuant to a decree of the First Spanish Republic of 1868, proclaiming religious freedom in her possessions. The original frame and galvanized iron structure, replaced by the present mission-style building in 1926, was the gift of Queen Victoria to her English subjects in Puerto Rico, and the building was shipped in sections from Liverpool, the site being donated by the Schuck family of Ponce. At the downfall of the Spanish Republic, the church was ordered to be closed, but Queen Victoria used her good offices and it was allowed to hold services provided the church bells were not rung. They were rung for the first time after the ban during the American occupation, July 25, 1898.

16. PARQUE DE LA ABOLICIÓN, a triangular square, commemorates the abolition of slavery in Puerto Rico, and is the scene of a yearly celebration of that event. It has been turned into a playground.

In 1503 Nicolás de Ovando, the first governor of the Indies, obtained permission to transport Negroes from the south of Spain to Hispaniola. Bartolomé de las Casas petitioned the Emperor of Spain in 1517 for the substitution of Negro slaves for Indians to work the mines, and

the following year Charles I licensed the transport of 4,000 Negro slaves to the Americas by Lorenzo de Carrevoal. The first shipload of slaves was brought to the Antilles by John Hawkins, English privateer, in 1562, and between 1564 and 1567 the Englishman made two expeditions to Africa to capture slaves for the Islands. Thus, long before slaves were introduced into Virginia in 1619, the practice of Negro slavery flourished in the West Indies. During the next century and a half slave traffic with the Americas was a source of revenue to Portuguese, Dutch, Swedish, Italian, and English traders.

Meanwhile, abolitionist sentiment was growing. The first abolitionist committee was formed in England in 1789, and the slave trade was suppressed by Denmark, Sweden and Holland. Toussaint L'Ouverture outlawed slavery in Santo Domingo in 1801, upon making himself master of the Island. In 1815 Portugal suppressed the slave trade in the north of Ecuador, and this action was rapidly followed by similar acts of other nations, until slavery was made illegal in the British dominions in 1838. Slavery was completely abolished in France in 1849, in Holland in 1863, in the United States in 1865, and finally in Puerto Rico on March 22, 1873.

The MASONIC LODGE is at the N. side of the park. About the park are many attractive residences and gardens. 17. ASILO DE HUÉRFANOS (R), a home for orphan boys, occupies the fine building of the former Hotel Francais.

18. The RAILROAD STATION, corner Campeche St. (R), is the terminus of the American Railroad Co.

Retrace Marina St. to Mayor St. N. on Mayor St. to Luna St. E. on Luna St.

19. The COLEGIO PONCEÑO DE VARONES, end of Luna St., a Roman Catholic boarding and day school for

boys, conducted by the Marianist Brothers of Dayton, Ohio, was established by Bishop Edwin Byrne in 1925. Adjoining the school grounds is the PARISH CHURCH OF LA MERCED, a charming example of the Spanish Renaissance style. Entrance to the Church is on Aurora St.

Retrace Luna St. to Salud St., W. on Salud St.

20. The MCKINLEY PUBLIC GRADE SCHOOL (R), built in 1908 and named for the President, is one of the first public buildings in the city. The offices of the Superintendent of Schools for the district are located here.

21. The LICEO PONCEÑO, N. corner Salud and Cristina Sts., is a non-sectarian private day school for girls, founded in 1912. The school building is a two-story concrete structure of a modified Mission style.

E. on Cristina St.

22. The PONCE HIGH SCHOOL (R) is a large gray concrete building, E-shaped in plan, with a striking facade featured by a tall free-standing Tuscan colonnade.

N. on Montaner St., W. on Isabel St.

23. The ACADEMY OF THE SACRED HEART (L), for girls, supervised by the Mesdames of the Sacred Heart, is a two-story Spanish-built house of the colonial period.

Retrace Isabel St. to Grand Stand St., N. on Grand Stand St.

24. The ATHLETIC FIELD (R) is the site of the old military Spanish parade grounds. The grandstand has a large seating capacity.

25. The DISTRICT COURT (R) and Jail, formerly the Spanish military headquarters, known as *El Castillo* (the Castle), is of typical Spanish military construction, with massive walls, high beamed ceilings, and arched corridors.

MOTOR TOUR 1—3.7 m.

At Campeche St. S. on De Hostos Ave.

26. The ASILO DE HUÉRFANAS (L) is a home for orphan girls. The gray painted building is attractive in its simple colonial architecture. A statue of the Archangel Gabriel and a child is at the main entrance.

27. The PONCE ELECTRIC CO., (L) bought by the Insular Government through a loan of \$1,400,000 contracted with FERA, furnishes power to the city and neighboring territory.

The PLAYA DE PONCE (6,850 pop.), the second most important shipping center of the Island, is the port of the city, being a mile in length by three-fourths of a mile in width and thirty feet deep. Along the water front are several warehouses with large storage capacity. The architecture of many of the houses is unique—large, conical tile-roofed houses of a century ago, and little gingerbread-like structures resembling doll houses.

The Playa served as a landing point for American troops during the Spanish-American War in 1898. On July 27 the *Dixie*, *Annapolis*, and *Wasp* under Commander Davis entered the port and demanded the surrender of the city of Ponce and port. Lieutenant G. A. Merriam, accompanied by Ensign G. C. Lodge, was sent ashore to demand the surrender. Ubaldo Pérez Cossio, Captain of the Port, replied that he was simply an officer without any authority to negotiate or surrender. It is said that when Lieutenant Merriam demanded the surrender, Pérez Cossio, pointing to the American ships in port, said: "So far as I can see, the port is yours." Lieutenant Merriam then got in touch with Don Fernando M. Toro, the British Vice Consul at Ponce, who was asked to communicate the demand of immediate surrender of the city to Colonel Leopoldo San Martín, post commander. After San Martín's refusal and that of

Governor General Macías at San Juan, the Americans threatened to take the city by force, but through the good offices of Vice Consul Toro and the rest of the consular corps, the city was surrendered, and at 10 a.m., July 28, the Stars and Stripes were hoisted over the City Hall by Ensign Lodge. On the same day General Nelson Miles and his troops entered the city, and issued his famous peace proclamation (*see History*).

28. The RUIZ BELVIS and SANTIAGO GRADE SCHOOLS (L), Real St., adjacent to each other, are the educational centers of the Playa.

29. The BAPTIST CHURCH (L), Real St., founded in 1904, is a small frame structure resembling a New England house of worship.

30. The SANCTUARY METHODIST EPISCOPAL CHURCH (R) is a cement block structure.

31. The PUERTO RICO IRON WORKS, INC. (L), established in 1918, manufactures and repairs sugar mill machinery.

L. on Virtud St. to Iglesia St.

32. OUR LADY OF MOUNT CARMEL ROMAN CATHOLIC CHURCH is surrounded by grounds with many trees. The cornerstone was laid on April 18, 1876. The side tower is modeled after the Cathedral towers in Ponce.

Retrace Iglesia St. on Real St., R. on Arias St. to Alfonso XIII St.

33. The PLAZA is a small recreational arena overlooking the Caribbean. The Plaza benches were donated by organizations, and their names are inscribed thereon.

34. The SITE OF PONCE FORT, constructed in 1760, is at the corner of Arias and Alfonso XIII Sts. A motion picture house now occupies the ground.

Retrace Real St.

L. on Virtud St.

35. The U. S. CUSTOMHOUSE (R) is a remodeled Spanish building. It was used by the American troops as headquarters when they landed at the Playa.

Retrace Real St. straight to Pier.

36. The MUNICIPAL PIER is a steel structure 325 by 427 ft. A new wharf and sea wall facilitate the docking of ships and handling of cargo.

MOTOR TOUR 2—3.7 m.

E. from Comercio and Salud Sts. to E. Portugués River Bridge.

37. LA CEIBA DE PONCE (R) across the bridge, is an immense West Indian silk cotton tree, reputed to be more than 300 years old. During the early settlement of Ponce near the tree stood a store owned by a man named Rodríguez, *El Portugués* (Sp. the Portuguese). The river, which previously was called *El Guadalupe*, acquired this name.

38. CUATRO CALLES (Sp. Four Streets) is a long unattractive rambling section of Ponce. Here is the CHAPEL OF SAN ANTONIO, where on June 13th, Saint's Day, pilgrims come from Ponce.

L. at 2.5 m. a graded road.

39. CENTRAL MERCEDITA, 0.8 m., is a large sugar enterprise developed through a consolidation of several *haciendas* acquired by the Serrallés family of Ponce from 1859 to 1896. In 1927 the corporation established the first sugar refinery in the Island. Its recently constructed distillery affords a large amount of employment during the dull season in sugar. About the Central is a large model village for the employees. On the grounds is a private airport.

MOTOR TOUR 3—5.1 m.

On Military Road.

40. EL CLUB DEPORTIVO DE PONCE, in the Alhambra suburb, organized in 1915 by leading citizens, is one of the most interesting social and sport clubs in Puerto Rico. The Clubhouse, typical of sport centers in the United States, has an attractive veranda overlooking the athletic field. The pavilion for women members has a spacious hall and stage.

W. over the bridge crossing the Portugués River into Guadalupe St.

41. LA MILAGROSA ROMAN CATHOLIC CHURCH (R), is of Spanish type; but the interior, with the balcony around three sides, shows a French influence.

42. The POST OFFICE AND FEDERAL COURT BUILDING (L), corner Atocha St., is a new two-story construction in a modernized Spanish Renaissance style. The facades are plain, having small ornamental terra-cotta panels and a delicate band immediately below the projecting tile roof. The District Federal Court for the southern region of Puerto Rico occupies the second floor.

N. on Bértoly St.

43. The TRICOCHÉ HOSPITAL, N. corner Bértoly and Tricoche Sts., erected in 1863, is a remodeled two-story *mampostería* (brick and mortar) Spanish colonial building, occupying a city park. The money for the building was left to the city by Don Valentin Tricoche, whose remains are in a crypt in the chapel of the institution. In 1865 the *Hospital Civil* was annexed and formally opened in 1896.

At this Point Bértoly St. becomes a steep upgrade to El Vigía Road.

44. EL VIGÍA (Sp. the watchtower), a high hill once a lookout for ships at sea, is a charming suburb with attrac-

tive residences. In days gone by the ship announcer hoisted the flag of the nation to which the incoming ship belonged. From here the view of Ponce and the surrounding countryside is superb—the city below, to the south the broad Caribbean dotted with islets, to the north the rugged contours of the Cordillera Central and the southern lowlands and foothills, and to the east and west extensive sugar cane plantations. Among the houses the palatial mansion of the Serrallés family, with its beautiful terraced gardens, stands out prominently.

Retrace Guadalupe St., W. to Hospital St., N. on Hospital St.

45. ST. LUKE'S MEMORIAL HOSPITAL, founded in 1907 and under the auspices of the Board of Missions of the Protestant Episcopal Church of New York, is pleasantly situated on the NW. slope of El Vigía. It is a large, rambling structure three and four stories high. The institution maintains a nurses' school.

Retrace Guadalupe St. to 25 de Enero St. N. on 25 de Enero St.

46. The TUBERCULOSIS HOSPITAL of the Insular Department of Health for the southern district, comprises a number of modern pavilions and cottages, having a capacity of 200 patients.

Retrace 25 de Enero St. L. into Victoria St., W. on Victoria St.

47. The LITTLE FLOWER CONVENT AND CHURCH (R), is in the Spanish Renaissance style.

48. The DISTRICT HOSPITAL, corner Victoria and District Sts., of the Insular Department of Health, is a general hospital serving thirty-six municipalities of the southern area.

Retrace Victoria St., W. on Victoria St.

49. The JUAN MORELL CAMPOS DEVELOPMENT, Barrio Cañas, junction of PR 2 and PR 6, is a project of the PRRA, designed by the architects Jorge Ramírez de Arellano, Raúl G. Reichard, and Víctor R. Vela, and engineer Miguel A. Montilla. It is located on a tract of land of approximately 40 acres; and its 150 buildings, completed in 1938, include store buildings, a school, and a public square. Electrical distribution, water supply, and sewer system, as well as paved streets and sidewalks, are part of the development. The architecture generally follows the Spanish Colonial precedent, with some modern modifications. The plan of each house calls for living and dining room, porch, two or three bedrooms (each with closet), bath room, and a kitchen equipped with modern plumbing fixtures; electric lighting and charcoal stove. The exteriors are charmingly varied and painted in pastel tints. The objective of this and other PRRA housing projects is to do away with the typical malodorous slum areas of Island communities.

Mayagüez

- Railroad Stations:* Boulevard Veve, opposite Suau Park, Mayagüez Playa (American Railroad Co.).
- Bus Station:* Plaza Principal. Moderate priced public cars and taxis available.
- Piers:* Mayagüez Shipping Terminal, Mayagüez Plaza.
- Traffic Regulations:* (See General Information.)
- Accommodations:* Hotels, boarding houses, furnished apartments, moderately priced.
- Information Service:* Police Station, Cristy Avenue.
- Motion Picture Houses:* Six.
- Athletic Field:* At College of Agriculture.
- Swimming:* Guanajibo beach, 15 min. from city.
- Annual Events:* February 2nd, Our Lady of Candlemas (Patron Saint), fireworks, games, dances (see *Calendar of Events*).

MAYAGÜEZ (16 alt., 50,371 pop.), third largest city in the Island, popularly known as "Sultana of the West," is the seat of the Fourth Senatorial District. Situated at the foot of the mountain range, the city overlooks Mona Passage, separating Puerto Rico from Santo Domingo. From the bay Mayagüez appears to be sprawled over a broad plain, checkered with sugar plantations and traversed by the Yagüez River. The plain suddenly narrows as it

approaches the foothills of the Cordillera Central, which looms in the background.

The large and deep harbor affords an extensive view of the cove-like shoreline, set off by a fringe of palm trees and dominated by deep green headlands, contrasting with the blue sea. In the immediate environs are nondescript houses of workers.

Like nearly all cities and towns of Puerto Rico, Mayagüez still retains its colonial aspect, although this is gradually giving way to the modern American style. The character and customs of the people are distinctly Spanish.

In the center of the city is the Plaza de Colón or Columbus Plaza, the recreational area of the community. On Sunday evenings Mayagüezanos gather there to promenade. Facing each other across this enclosed plaza are the Catholic Church and the City Hall. To the east and west are retail stores, hotels, and cafés. In little more than a decade the population has been more than doubled.

Mayagüez started as a district of the municipality of San Germán. In 1760 the settlement was founded as Our Lady of Candlemas of Mayagüez, and in 1836 it was granted the title of *villa*.

In August, 1777, two American sloops, the *Budarwock* and *Henry*, took refuge in the harbor after being pursued by the British frigate *Glasgow*, and the townspeople hoisted the Spanish flag over them. The British demanded their surrender and, upon refusal, appealed to the Governor of Puerto Rico, who upheld the people of Mayagüez.

The year 1841 was disastrous; a terrible fire practically wiped out the town. In order to help in the rebuilding Governor Méndez Vigo transferred the entry port privilege from Cabo Rojo to Mayagüez. By 1877 the town had become an important commercial and cultural center, and was made a city.

In 1918 a terrific earthquake, tidal wave, and fire left

scarcely a building undestroyed. Once more its citizens began energetically to rebuild the city.

More than 100 public schools have an enrollment of about 7,000 pupils. In the outskirts are the College of Arts and Mechanics, the Federal Agricultural Experiment Station, and the Industrial Reform School for Boys. The city is the site of the Farragut School, the first educational institution erected under American sovereignty.

In the cultural life of the Island Mayagüez has been active. Here were born three men prominent in the country's history. Eugenio María de Hostos (1839-1903), the foremost reformer of the Island, had strong democratic ideas. Throughout his life he worked for the abolition of slavery, autonomy for the West Indies, the rights of labor, and the education of women. He lived in and urged the political liberation of many Latin American countries, from Chile to Cuba, and was greatly loved by Santo Dominicans. After the American occupation of Puerto Rico, he formed the League of Patriots, whose primary purpose was to see to it that the United States allow Puerto Ricans to decide their own political status—a proposal he failed to accomplish, but which was still being urged in 1939 by others, among them his son Adolfo María de Hostos, official historian of the Island. During a busy life in political and educational reform, Eugenio María de Hostos found time to write about fifty volumes covering the whole field of moral and political science, not all of which have been published. José María Monge (1840-91), although lacking in formal education, acquired the use of Latin, Italian, English and French, and became one of Puerto Rico's foremost classical writers. Manuel María Sama (1850-1913), was the editor of an anthology, *Puerto Rican Poets*. He was a dramatist, poet, and historian, and for some time was president of the Atheneum in San Juan. Among his

historical treatises was one in which he affirmed that the site of Columbus' Puerto Rico landing was Mayagüez.

The city is an important shipping center. Over 300,000 people in the neighboring towns are dependent on the port, which is large and deep, and affords safe anchorage for large vessels. The Mayagüez Shipping Terminal, with its 1,200-foot wharf, has storage and transfer sheds, rail and highway connections.

The surrounding country produces sugarcane, coffee, fruits, vegetables, honey, tobacco, and hides. Small industries are numerous, manufacturing cigars, clothing, floor tile, soap, furniture, macaroni, candy, rum, and other distilled products. The famous Puerto Rican embroidery and fancy needlework industry is concentrated in Mayagüez, and is second only to sugar in export value and wages paid. This craft employs many thousands of workers in the thirty-odd factories, and approximately 65 per cent of all shipments go through this port.

POINTS OF INTEREST

FOOT TOUR 1—1 m.

At Columbus Plaza, W. on McKinley St.

1. COLUMBUS PLAZA is featured by an impressive monument to the discoverer, erected in 1893, the 400th Anniversary of his landing here. The bronze statue of the Admiral stands on a globe which is supported by a stone base carved with figures of Isabella and Ferdinand and Indian heads. The Plaza is lighted by electric bulbs held by bronze figures brought from Spain.

2. The CHURCH OF NUESTRA SEÑORA DE LA CANDELARIA (L), rebuilt after the earthquake in 1918, follows the Spanish church style of wide arches and thick walls. The building is attractive in its simplicity. The gilded side altars are particularly noteworthy.

3. LA ALCALDÍA (City Hall), corner McKinley and Peral Sts., is a handsome two-story Renaissance building with pure classical details. Its main facade has a portico formed by a tall Corinthian colonnade supporting a pediment, over which rises a graceful domed turret housing a clock in the manner so common in American Colonial architecture.

4. The YAGÜEZ THEATRE, SE. corner Basora St., named after the river, was originally erected in 1908. On June 19, 1919, it caught fire during a performance, causing the loss of 50 lives, with more than 100 injured. The present structure, built in 1920, is designed in a free Renaissance style where classical forms and details have been topped with a glass dome studded with electric bulbs.

5. The ROYAL BANK OF CANADA, NE. corner Basora St., is typical of modern financial structures.

6. The FEDERAL BUILDING, SE. corner Mango St. and Veve Ave., is an attractive two-story building designed in the Spanish Renaissance style and painted yellow. The exterior is plain, having a delicately decorated main entrance way and a fine porch with graceful iron balconies at the second floor level. The Post Office occupies the main floor. In the rear are the ruins of the Spanish *cuartel*, or military quarters.

7. The FARRAGUT SCHOOL, opposite the Federal Building on Veve Ave., is the first public educational institution under the American sovereignty. The old cement building and annex are set in the midst of well-kept grounds shaded by huge mango trees.

Right on Mango St.

8. The MAYAGÜEZ HIGH SCHOOL (R) is a large concrete building with mosaic designs over the entrance and windows. There is a grade school annexed.

E. on Muñoz Rivera St.

9. The MARKET PLACE (R), the oldest of its kind in the Island, is a huge *mampostería* structure equipped with stalls for dry goods, fruits, and vegetables.

10. The MUÑOZ RIVERA PARK, corner San Salvador St., is featured by a marble statue of Luis Muñoz Rivera. On the base are carved the lone star of the flag and the seal of Puerto Rico. The park, a restful little place embowered with flowers, is provided with granite benches donated by local institutions. On the N. side is the MUÑOZ RIVERA GRADE SCHOOL.

*MOTOR TOUR 1—2 m.**N. from Tetuán St. on De Hostos St.*

11. JOSÉ DE DIEGO PARK is a triangle dedicated to the poet, lawyer, advocate of Island independence and of an Antillean Confederation of Cuba, Santo Domingo, and Puerto Rico. A bronze bust of the former speaker of the Insular legislative assembly rests on a granite base.

12. The IMMACULATE CONCEPTION ACADEMY, NW. corner Degetau St., is a Catholic parochial school conducted by the American Redemptorist Fathers and the Sisters of Notre Dame. The patio is bedecked with flowers and plants, and the poinsettias are gorgeous at Christmas. The oak gate leading into the patio is particularly attractive.

13. SUAUI PARK, Veve and Virginia Aves., named after Don Salvador Suau, Mayor of Mayagüez during the Spanish regime, is the largest recreational area in the city. Its walks are lined with graceful Australian pines and stately royal palms.

THE AMERICAN RAILROAD STATION (R) faces the park.

14. The PLAYA, third most important shipping center of the Island, is the port of Mayagüez. Here are concen-

trated all the shipping activities of the western and north-western regions. A good part of the Island's import and export trade passes through here. The community is a cluster of large warehouses, moderate homes, humble non-descript dwellings of the poorer class, churches, schools, small stores, and bars. The UNITED STATES CUSTOM-HOUSE, facing the water front, is another example of the handsome design adopted for Federal buildings in the Island, the pink-tinted colonnaded front being particularly attractive.

MOTOR TOUR 2—1 m.

At Roosevelt St. W. on Post St.

15. ASILO DE POBRES (*visitors welcome*) (L), a large one-story building of Spanish colonial type, affords a home for the indigents of the city.

16. The CENTRAL PRESBYTERIAN CHURCH, NE. corner De Hostos St., has a handsome patio with magnificent specimens of the royal palm trees that grow so luxuri-

POINTS OF INTEREST—MAYAGÜEZ

- | | |
|--|--|
| 1. Columbus Plaza | 13. Suau Park |
| 2. Church of Nuestra Señora de La Candelaria | 14. Playa |
| 3. La Alcaldía | 15. Asilo de Pobres |
| 4. Yagüez Theater | 16. Central Presbyterian Church |
| 5. Royal Bank of Canada | 17. Milagrosa Academy |
| 6. Federal Building | 18. San Antonio Municipal Hospital |
| 7. Farragut School | 19. Federal Agricultural Experiment Station |
| 8. Mayagüez High School | 20. College of Agriculture and Mechanic Arts |
| 9. Market Place | 21. Coconut Hut |
| 10. Muñoz Rivera Park | |
| 11. José de Diego Park | |
| 12. Immaculate Conception Academy | |

antly in this section of the Island. Indigenous to Puerto Rico, the royal palm not only predominates in the local landscape, but is one of the Island's most important economic trees. The sheathing base of the leaf, called *Yagua*, and the leaf itself are used for roofing and siding huts and the outer portion of the trunk for lumber. The small fig-like fruit makes excellent feed for swine.

17. The MILAGROSA ACADEMY (L), Post and José de Diego Sts., is a Girls' School conducted by the Sisters of Charity.

18. The SAN ANTONIO MUNICIPAL HOSPITAL (L), Post and Los Millionarios Sts., dates back to Spanish times.

Across the Yagüez River Bridge to a triangle. R. at the triangle.

19. The FEDERAL AGRICULTURAL EXPERIMENT STATION is said to have the largest collection of tropical plants in the Western Hemisphere. It is provided with well-equipped offices and laboratories, and surrounded by grounds beautifully landscaped with harmoniously assembled tropical plants, both native and introduced. Many tropical plants that are the sources of commercial products grow here, such as vanilla, cacao (the source of chocolate), spice crops, cinnamon, nutmeg, ginger, curry; bay oil trees (used in the making of bay rum), ilang ilang, and other such crops from which perfumes are made. Several interesting drug crops are being grown. Coffee plants, bananas, mangos, and coconuts are also to be seen.

The activities of the Experiment Station are directed towards three general objectives: to aid in the economic reconstruction of the agriculture of the Island; to aid projects for the benefit of the agriculture of continental United States, utilizing the advantages of the twelve-month growing season and tropical climate at Mayagüez for this

purpose; and to study tropical crops essential to the welfare of the United States.

The Experiment Station is conducting studies and co-operating to check the severe erosion in many regions of the Island, to aid in the rehabilitation of soils already eroded, by the restoration of crop nutrients and organic matter, and to provide crops which will sustain the small farmer while these soil-conserving and rebuilding processes are being carried on. The station is developing new varieties of cucumbers, peppers, summer squash, onions, and other vegetables which might yield large returns per acre when marketed in the continental United States during the winter months, and it has introduced 63 varieties of mango from tropical countries, many of which are free of fiber and possess excellent flavor.

In the East Indies bamboo is one of the most valuable crops produced. In Puerto Rico there is only one species of bamboo commonly grown, *Bambusa vulgaris*, which is of a soft texture, often subject to severe insect borings, and otherwise of little value for construction purposes. The Experiment Station has introduced 35 new species, some of which are hard and resistant to boring insects and of great value for the construction of furniture, farm buildings, and appurtenances. Articles of bamboo manufactured in Puerto Rico enter Continental United States duty-free.

Left at the triangle.

20. The COLLEGE OF AGRICULTURE AND MECHANIC ARTS consists of thirty acres of ridge and valley adjoining the land of the Federal Experiment Station, giving the college ample acreage for agricultural experiments. As the hilltop is approached, the first building passed (R) is the LIBRARY, completed in 1935, a modern fireproof structure in a modernized classic style. It houses the College library, classrooms, and part of the administra-

tive offices. The building is approached from two levels, the main floor being entered from a Doric colonnade which forms the principal motif of the main facade. The SCIENCE BUILDING (L) which houses some of the classrooms and administration offices, is the oldest of the group and the only one of the original buildings which survived the earthquakes and fire of 1918. This building has wide porches at both floors, a pitched roof with over-hanging eaves and ivy-covered walls which strike a pleasing contrast with the rest of the buildings. To the east is DEGETAU BUILDING, used principally for chemistry, physics, and biological sciences. The building was destroyed by fire, which followed the earthquake of 1918, and rebuilt shortly afterwards. On the western corner is the DEAN'S RESIDENCE, a fine house of Spanish colonial character, with fine tile roofs and graceful iron balconies. On the northern edge of the ridge is the PLANT INDUSTRY BUILDING, completed in 1937. It houses classrooms, offices, and laboratories of the school of agriculture. It is a fine modern classical building, ample in size and fully equipped for teaching and investigation. The ENGINEERING BUILDING, completed in 1939, is an important addition to the physical plant of the College, large and modern to harmonize with its neighbor, the PLANT INDUSTRY BUILDING.

A three-acre ATHLETIC FIELD with concrete bleachers was completed in 1938. It consists of an oval track for running events, a baseball field, and a tennis court.

Other buildings used for class work and located on the campus include the power building, where the steam engineering and hydraulic courses are conducted, the engineering shop for pattern making, forge, foundry and machine shop; the dairy laboratory, barn, and plant house.

The COLLEGE FARM, consisting of 93 acres of rolling land devoted to grass, coffee, fruits, and woodland, is located about one-half mile northeast of the campus.

MOTOR TOUR 3—3.1 m.

On Cristy Road SW. on PR 37.

21. COCONUT HUT (R). (*Bathing, fishing and dancing*), on Guanajibo Beach, is a commodious residence turned into a hotel. Adjacent to it is the Guanajibo Yacht Club.

22. The INDUSTRIAL REFORM SCHOOL FOR BOYS, established in 1907, is situated on a 65-acre farm overlooking Mona Passage. The grounds and buildings, in their beautiful setting of rolling country and sea, resemble a fine country club more than a reform school. As the school grounds are entered (R) is the large landscaped open-air swimming pool built by the boys in a hollow above the shoreline. To the left, on a knoll, is the chapel, in Spanish Mission style, also built by the boys, a sum to purchase the materials being given by Father Joseph Murphy, a Redemptorist of Chicago. At the hilltop is the Administration Building, rather grim in structure, where are located the offices, workshops, and classrooms. The establishment also includes five dormitories, a hospital, and a large athletic field. To the south of the administration building is the Mayagüez Golf Club, where the boys earn spending money by caddying.

The school has accommodations for 250 boys. Although a reformatory, the institution is more like a military school. Its purpose is to provide young delinquents with an adequate moral and educational training.

In addition to the regular public-school education, courses in vocational training are offered. Each boy is taught the trade for which he shows most aptitude, with the objective of making him a self-supporting citizen. Tools used in his apprenticeship are given him at graduation. Compensation for work done in the shops is retained as a saving fund, being refunded to him at the time of release. A 20-acre

truck farm where 150 boys receive agricultural instruction supplies the school with vegetables and fruits.

The school band, reputed to be the best in the Island, is in constant demand at social and public functions. Band members are presented with their instruments when they leave the school. Recreational and athletic activities are emphasized, and every boy is given the opportunity to take part in some sport. Motion pictures are shown once a week. Many of the boys are allowed weekends at home, and others are granted Sunday liberty to visit Mayagüez. The majority spend the Christmas holidays at home, returning to school voluntarily. Because of the wholesome discipline of the school and the spirit of good fellowship, comparatively few inmates run away.



PART III

Tours



Tour 1

EL CAMINO REAL

San Juan—Río Piedras—La Muda—Caguas—Cayey—
Aibonito—Coamo—Juana Díaz—Ponce; 81.8 m. PR 1.

Road paved throughout.

Bus, automobile lines and public cars make daily trips.

Hotel accommodations in all towns.

PR 1, El Camino Real (Sp. the royal road), also called the Military Road, crosses the Island from San Juan on the north in a southwesterly direction to Ponce on the south. This scenic and historic route runs from the ancient gates of San Juan to the thriving city of Ponce on the Caribbean side of the Island, over mountain passes and roads built by the Spanish *conquistadores* (*see Transportation*). This is an ideal short tour for the visitor who wishes to get an idea of Puerto Rican life, some acquaintance with its scenic beauty, and a glimpse into its historic past. It can be easily traversed in one day of leisurely driving with stop-overs at attractive resorts for refreshments.

Construction of the highway was begun in 1856 and completed in 1886 at a cost of \$1,358,234. Military and civil engineers from all over the world admired this engineering feat. Despite the physical handicaps, the tropical climate and labor difficulties, the engineers pushed forward the construction of this model for mountain roads in other countries. The 136 kilometers were built almost entirely by hand labor. The workers included hundreds of convicts,

including Cubans and Chinese, many of the latter having come from the Philippine Islands. Free laborers, ex-convicts, drafted vagrants, and some women were also employed. The vagrants were forced to work for half-pay, while the minimum daily wage paid to the free laborers was three reales, equivalent to 37 cents. The work was hard and painful. Innumerable precipitous mountains had to be skirted. Crushing rock by hand was almost impossible because of the hardness of the rock found in most places, so that finally in 1879 two mechanical rock crushers were imported. The Chinese were the best workmen, enduring the hardships stoically, many of them dying from sunstroke.

With the completion of the Cayey-Aibonito section of the road the great forty-year project came to an end. In addition to nineteen bridges, many retention walls and kilometer markers, and thirty-three small tool- and road-keeper structures were built. These buildings were conveniently located along the entire length of the road so that its upkeep could be carried on methodically.

PR 1 crosses the SAN ANTONIO BRIDGE over the San Antonio Channel connecting San Juan with the mainland at Miramar, 2.4 m., a section of Santurce (*see San Juan*).

At the MARTÍN PEÑA BRIDGE, 5 m., is the boundary between the municipalities of San Juan and Río Piedras. (Here the road is known as Muñoz Rivera St.) This is the site of the Spaniards' defeat of the English on April 21, 1797. The modern structure, opened to traffic in 1939, replaced the narrow arched bridge erected in 1846. To the left is a squatters' settlement, the ramshackle houses built on stilts rising above the swampy waters of the Martín Peña Channel. The PRRA is filling and draining some of this area as part of its land reclamation and malaria control program in the Island, which will improve health conditions and make land available for the building of houses in the clearance of slums.

At the south end of the bridge is HATO REY, a suburb of Río Piedras. Formerly this area was devoted to the dairy industry; today it is composed of residences. Lining the road are cultivated flower gardens and *Se Venden Flores* (flowers for sale) signs. Several sanitariums and medical centers are located in the environs of Hato Rey.

L. at 5.5 *m.* on a road leading to LAS MONJAS RACING PARK, approximately one-half mile from the main road, a race course in a beautiful tropical setting.

At 5.8 *m.* is the junction with PR 45.

At 6 *m.* on PR 45 is the ELEANOR ROOSEVELT DEVELOPMENT of the PRRA, located on a 227.19 *cuerdas* tract of land. The Development is a modern town in itself, with paved streets, sidewalks and drains, water system, sanitary and storm-water sewerage, a school, a police station, an underground electrical distribution and telephone system. There are 131 one-family houses, 91 two-family houses, 4 block model units for 128 families and 31 three-bedroom houses—in all 472 dwellings in which nearly 2,500 persons live. No particular style of architecture has been adhered to. Some houses follow the Spanish colonial traditions, and some are designed along modern lines. Both styles have been simplified to the extreme in order to bring the cost down without sacrificing comfort and convenience. Each house consists of a porch, a combination living and dining room, two or three bedrooms with closets, bathroom equipped with modern plumbing and a kitchen with a charcoal stove. The construction work is still under way (1940) and the cost of the entire project of 2,000 houses will amount to \$6,200,000, when completed.

At 6.3 *m.* is the Quintana road L., which leads to Quintana Racing Park, 0.6 *m.*

At 6.8 *m.* is the AUXILIO MUTUO, a large hospital, excellently equipped, organized by the Spanish colony in the Island in 1900. The main building, a two-story structure divided into three sections, is of simple Spanish Colonial architecture. The Annex to the right follows the Moorish mode. In the back, to the left, are eleven pavilions used for contagious and communicable cases. The institution maintains a dairy and poultry farm.

RÍO PIEDRAS (Sp. River of Stones), 7.5 m. (86 alt., 19,933 pop.), chartered in 1714 and originally known as El Roble (Sp. the oak), is almost an extension of San Juan. PR 1 narrows down to a typical Puerto Rican street with its close-to-the-street houses. Río Piedras is a college town. Besides being the site of the University of Puerto Rico it is the home of several private and public schools. On Sunday evening, the Plaza takes on the aspect of a college campus. Fraternity, sorority, and religious organizations are established parts of the students' life.

Within the limits of the municipality are the INSULAR EXPERIMENT STATION, the PSYCHIATRIC and TUBERCULOSIS HOSPITALS and INSULAR PENITENTIARY, and the reservoir which supplies water to the city, San Juan and neighboring towns (*see Tour 1A*).

Río Piedras is an important agricultural and industrial center—cane, tobacco, cattle, and fruits are raised extensively, and bricks, tile, and lime are manufactured. Cigar-making is also an adjunct to the town's industry, while the dairy industry plays a large part in the commerce of the municipality.

The UNIVERSITY OF PUERTO RICO, Muñoz Rivera and University Sts., founded in 1903, serves as the focal point of the Island's culture. The major portion of the University's arts, science, education, law, pharmacy, and business administration departments, is located on a 165-acre tract. Imposing buildings, luxuriant tropical foliage, monuments, and walks make the campus one of the handsomest in the Americas.

In 1935, the PRRA assigned \$1,200,000 as an initial fund for a building program. When finished, the University should rank among the most beautiful and modern in the world.

The buildings, connected by arcades, form a quadrangle around an open court. A semi-circular road leads to the

ADMINISTRATION BUILDING, built in 1912, which when remodeled will be the center of the entire unit. An effective addition to it is a majestic clock tower, 170 feet high. The JANER and NORMAL BUILDINGS, flanking the Administration Building, have been remodeled to conform to the Spanish Renaissance architecture of the entire group. The facades of the buildings are done in polychrome terra cotta of Spanish Plateresque style. Directly opposite the Administration Building, across the court, is a large AUDITORIUM with a seating capacity of 2,100, its modern equipment including a revolving stage and an air-conditioning system. Back of the Auditorium is a large ATHLETIC FIELD, and R. the CARLOTA MATIENZO GIRLS' DORMITORY, a hollow square building of simple Spanish style with a patio at the center, adorned by a fountain and a garden. On the first floor, at the L. of the entrance vestibule, are the offices and quarters, and R. a large living room and study hall. The dining room, pantry, kitchen, refrigeration room, and food storage space, are located at the rear of the building.

A road branching L. off the main entrance to the University leads to the CHANCELLOR'S HOME, a charming Spanish bungalow. Not far from it is the station of the United States Forest Service, where every imaginable plant and tree grown on the Island is found. On the road to the R. of the main entrance is the MODELO PRACTICE SCHOOL, and a few feet away stands a STATUE OF LUIS MUÑOZ RIVERA. Looking up to the Administration Building from a center lane, lined with royal palms and hibiscus, is a BUST OF ROMÁN BALDORIOTY DE CASTRO, engraved with the following words: "Who honored his teachers as a student, his students as a teacher, and his country as a citizen." Not far from this monument, to the L., is a BUST OF EUGENIO MARÍA DE HOSTOS, a great scholar and statesman

who was a leading figure in Latin America during the last quarter of the nineteenth century (*see Literature*).

The College of Arts and Sciences, with the largest enrollment, matriculates two types of students: those preparing to enter professional schools and those completing their school life with broadening cultural courses. The College of Business Administration was organized in cooperation with Boston University, which is consulted as to educational and administrative policies.

In 1925 the Legislature of Puerto Rico provided for an exhaustive study of the educational system of the Island by the International Institute of Teachers College, Columbia University. In 1939 another commission examined the University as to the possibility of its ultimately becoming a Pan-American institution. Both commissions emphasized the position of the university as a focal point of Spanish and English cultures.

The university as a whole, and individual members of its faculty, co-operate constantly with other institutions in projects of common interest. Particularly close and active is the co-operation with philanthropic, cultural, professional and athletic associations. With increasing frequency the faculty as well as members of the administrative staff are called upon to speak on a great variety of subjects before university and extramural audiences, the institution using lectures to diffuse knowledge beyond its campus. A bureau of publicity is maintained by means of which information about the university and contributions by its members are released to the press of the Island and other countries.

The library contains more than 50,000 volumes. Its collection on science, education, sociology, and economics is the most extensive in the Island. Purchased from Mr. Robert L. Jounghanns of Bayamón is a collection of books written and published in Puerto Rico. The university

library also contains many prints and books on art, donated by the Carnegie Foundation.

The Educational Survey Commission of 1925 stated in its report:

The University is almost in the center of the Americas. Both North and South may become tributary to it in the measure in which it deserves their consideration. Moreover, this is the only institution where Latin America and English-speaking North America meet on terms of complete equality, where both Spanish and English are the current media of communication and instruction, where consistent effort is made to harmonize and interpret to one another these two great cultures so diverse in origin and so prone to mutual misunderstandings. That contacts between these two cultures must multiply is inevitable. The University of Puerto Rico is strategically placed to promote these contacts and to render them increasingly fruitful.

The University maintains the Agricultural Experiment Station (*see below*) at Río Piedras and the College of Agriculture and Mechanic Arts at Mayagüez (*see Mayagüez*).

EL PENSIONADO CATÓLICO, SW. corner Muñoz Rivera and University Sts., is a residence for girls attending the University.

The CHURCH OF NUESTRA SEÑORA DEL PILAR, dominating the town's Plaza, is an attractive modern building of Spanish design.

LA CONVALESCENCIA PARK, Brumbaugh and Arsuaga Sts., was formerly the site of the Spanish governors' summer residence. Here a sample of every endemic floral species on the Island is grown.

LA MILAGROSA SCHOOL, de Diego and Ferrocarril Sts., is a large orphan girls' charity school maintained by the Sisters of Mercy.

THE PUBLIC MARKET, de Diego and Vallejo Sts., has an abundant supply of tropical fruits, vegetables and flowers, attractively displayed.

SAN JOSÉ ACADEMY, end of Giorgetti St., formerly St. Augustine Military Academy, under the supervision of the Marianist Order of Dayton, Ohio, commands a panorama of Río Piedras, San Juan, and the surrounding countryside.

THE BERWIND COUNTRY CLUB (*private*) has one of the best golf courses of the West Indies, occupying an 80-acre tract of naturally rolling land, with a beautiful landscape of palms and trees and a view of the placid SAN ANTONIO LAGOON. Courtesy cards may be obtained at the Chamber of Commerce, San Juan.

On PR 1, at 7.7 m. is a junction with a macadam road.

Left on this road is the INSULAR AGRICULTURAL EXPERIMENT STATION, 0.3 m. (*visitors welcome*), on a hilltop overlooking Río Piedras, the Central Vannina and the surrounding countryside. The well-kept buildings and grounds were the gift of the Sugar Producers' Association to the government of Puerto Rico. The extensive research work of cross breeding between imported and native varieties of cane sugar performed here is of great help to the Island's cane planters. The institution is affiliated with the University of Puerto Rico.

At 8.2 m. is CENTRAL SAN JOSÉ formerly VANNINA, one of the 40 highly modern sugar mills of Puerto Rico. The route crosses a level plain covered by waving sugar cane. To the E. and S. are the foothills and towering peaks of the LUQUILLO MOUNTAIN RANGE and to the N. fleeting glimpses of San Juan and the far-off Atlantic Ocean.

Sugar cane growing and manufacture are Puerto Rico's main source of support and employment. In normal times approximately 300,000 acres are under sugar cultivation. The introduction of the modern sugar factory or central, early in the century, was one of the paramount causes for sugar becoming the economic mainstay of the Island. The 200-odd individual moscavado sugar mills were consolidated into centrals, and the sugar sold to them by the planters on the basis of the sucrose content of the cane. This became known as the "colono" system.

The cane is harvested by hand by men wielding machetes, and from the field the cane is transported to the sugar factory by bull-cart, steel cars hauled by tractors, rail or truck.

At the factory the cane is cut by rapidly revolving knives and then crushed in a tandem of heavily loaded rolls or mills which extract about 95 per cent of the juice. The *bagasse* (residue cane) is used as fuel for the boilers. The juice from the crusher and first mill is treated with milk of lime, heated and pumped into the primary clarifier. The juice from the second mill is also treated with milk of lime, heated and passed to the secondary clarifier from which it goes back to be mixed with the juices of the crusher and first mill. This process clarifies the juice, i.e., removes some of the impurities from it. The clarified juice is then concentrated in the pre-evaporators and quadruple effects, which boil this juice and, by reducing its water content, turn it into syrup. The syrup is then further boiled in vacuum pans under low pressure, which turns it into a mass containing a large proportion of sugar crystals. This is called "A" sugar. The "A" sugar is passed through the centrifugals (rapidly revolving baskets working on the same principle as the cream-separator), and the "mother syrup" is separated from the sugar. The syrup is then processed again and a second and third "strike" of lower purity sugars obtained.

The residue from this process is known as final molasses. This by-product can be converted into solvents—butyl alcohol and acetone. At Central Lafayette of the P.R.R.A. (see *Tour 2B*) a factory has been built for the manufacture of these by-products.

The raw (brown) sugar is bagged and shipped to the United States for refining, some of it being sold for local consumption in the Island. Raw sugar consists of about 96 per cent sucrose and 4 per cent impurities and moisture.

From here PR 1 starts a gradual ascent to an altitude of 350 ft., skirting around curves, affording views of rolling country and rocky streams.

At 11.9 *m.* is the broadest span of the entire route, the NORZAGARAY BRIDGE, built in 1854 during the reign of Isabella II in memory of Fernando de Norzagaray, at one time Captain General of Puerto Rico. This structure, revealing in its architecture a distinct Moorish influence, is popularly known as El Puente de los Frailes, after a friars' convent that existed in the neighborhood generations ago.

After ascending to the top of a steep hill, at 12.1 *m.* the highway turns abruptly L. and winds its way around hills, bedecked by innumerable trees—the prolific mango, the feathery-leaved tamarind, the vivid flamboyant, the graceful Australian pine.

At 13.4 *m.* is LA MUDA and the junction with PR 25 (*see Tour 1A*). Here in stagecoach days, horses were changed. South of La Muda the route parallels the narrow and winding Río Cañas. Numerous roadside stands display sizzling *lechón asado*, or barbecued suckling pig.

At 14.1 *m.* is a steep upgrade with three sharp turns. This point is called LA GUARDIA CIVIL, for here during Spanish days the famous Civil Guard maintained a station. South of La Guardia Civil are numerous little villages at the very edge of the road; these have sprung up in recent years. A frequent scene of this region is a *jibara* or peasant woman carrying on her head a five-gallon can of water to her thatched hut on the summit of a hill. At mass on Sunday *jibaros* from the neighboring *barrios* crowd the church for the baptism of their children. Even the children of consensual marriages are baptized, as otherwise they would be *Moros* (Moors). The christening parties are lively and picturesque affairs. After the baptism the godfather distributes the *gala*, or coins, to street urchins. Then the guests go to the home of the child's parents,

where a feast awaits them, and where they dance and sing to a native orchestra.

At 20.2 *m.* is the first glimpse of CAGUAS VALLEY, with the city of Caguas nestled in the foreground and the SIERRA DE CAYEY in the background.

Caguas Valley is approximately 77 square miles in area, covering the municipalities of Caguas, Gurabo, and Juncos, and formed by tributaries and the middle section of the Río Grande de Loíza, the Island's longest stream. The Valley is planted mostly to sugar, although some of the finest tobacco is grown here and excellent pasture lands supply feed to a large dairy industry centered about Caguas. The Eastern Sugar Associates, one of the four largest leading sugar enterprises, are the owners of the two *centrales* in the region, as well as of large tracts of land planted in sugar and pasture for the work-oxen of the factories.

The approach to Caguas is superb. Giant *hucare* and flamboyant trees on both sides of the road form an endless series of Gothic arches.

At 21.8 *m.* is a steel bridge spanning the Cagüitas River to the city gates.

CAGUAS 22.2 *m.* (240 alt., 24,378 pop.) is the fourth largest city of the Island and the most important of inland cities. It is a communication center, the city plaza being the terminal for cars and busses from various points: San Juan to the north; Humacao and the intervening towns of Gurabo, Juncos, and Las Piedras to the east; Cayey and Cidra to the south; San Lorenzo to the southeast; Aguas Buenas to the northwest. Other outlying towns and rural districts are connected with Caguas by excellent roads.

Caguas is an important tobacco and sugar cane center, with numerous tobacco factories and a large sugar central, as well as a number of small industries making mattresses, cravats, rum, cigars, furniture, and candy. With 37 of the 900 certified dairy farms on the Island it is the leading

dairy center in the Island, serving San Juan, Río Piedras and nearby towns. During the height of tobacco prosperity in the Island in the early 1920's, Caguas' tobacco-stripping factories afforded employment to some 15,000 men and women.

Chartered in 1775 under the name of San Sebastián del Pinal de Caguas, the city was named after the Indian chief Caguax who ruled this vast and fertile valley at the time of the Spanish conquest of the Island. History has it that Ponce de León established a *conuco* or slave settlement in the neighborhood of the present city in 1510 and quarreled over it with Juan Cerón, who had been appointed governor of the Island by Don Diego Columbus, during the distribution of the Indians in 1511 (*see History*). During its early settlement Caguas was called *El Barrero* (Sp. clay) because of a variety of clay found here which was much used in making pottery. In 1855 a cholera epidemic decimated the population. By a royal decree of 1894 Caguas was made a city.

Caguas is the birthplace of several men of letters: José Gautier Benítez (1851-80); Dr. Manuel Alonzo (1823-90), the editor of *El Álbum Puertorriqueño*; and José Mercado (1863-1911), the "Momo" of Island literary circles (*see Literature*).

There are a number of social and fraternal clubs in the city, among which are the social and literary clubs, Knights of Columbus, Masonic and Odd Fellows lodges, and the Holy Name Society. The city has good hotels, restaurants, two banks, a municipal hospital, a medical clinic, and four theaters.

Some of the best amateur and professional baseball teams in the Island have been organized in Caguas, and there is an ample athletic park adjoining the high school.

The attractive plaza, the picturesque church, with a large

school and convent adjoining, and the attractive residential sections, are worth visiting.

The PALMER PLAZA, the largest in Puerto Rico, has many beautiful specimens of tropical trees. In the evening the populace quaintly parades, men in one direction, women in another, around the esplanade-like plaza.

The DULCE NOMBRE DE JESÙS CHURCH, under the supervision of the American Redemptorist Fathers, is a modern church building set high on a mound at the east side of the Plaza. The large stained-glass rosette on the facade shows up particularly well at night.

The GENERAL CIGAR COMPANY TOBACCO STRIPPING FACTORIES, end of Ruiz Belvis St., employing several thousand workers, afford an opportunity to observe the procedure of tobacco stripping and packing. The tobacco hands are dipped in a pail of water and then swung until the excess water is eliminated. By this process the leaves are softened and can be extended easily. Women then "strip" the leaves, tearing out the middle veins, after which the leaves are sorted according to the quality, size, color, and wholeness, and are then packed in bales for shipping.

The BUENA VISTA COCKPIT, foot of Corchado St., is the scene of lively fights held on Saturdays, Sundays, and holidays.

The CASERÍO LA GRANJA, Gautier Benítez and 3rd. Sts., is a resettlement project built with PWA funds for low-income families, and transferred to the PRRA. This development contains 78 units, 31 of which are one-bedroom dwellings; 41 two-bedroom and 6 three-bedroom units, having, in all, room for 400 persons.

The GAUTIER BENÍTEZ HIGH SCHOOL, Gautier Benítez and Wilson Sts., one of the finest public school buildings in the Island, has a large athletic field.

Southwest of Caguas is a perfect canopy of exuberant flamboyant trees, in full bloom during June and July, an

adornment for many charming homes, attractive in their setting of beautiful gardens and flowering hibiscus hedges. The flamboyant tree is a native of Madagascar. Here the highway winds in serpentine curves, skirting brinks of precipices in the SIERRA DE CAYEY, and affords vistas of the radiantly green valleys and meandering streams far below.

At LAS CRUCES (Sp. the crossroads) 30.6 *m.*, is the divide, 1,300 ft. above sea level, and the junction with PR 22, leading to Cidra (*see Tour 1B*). Southwest of Las Cruces the road gradually descends to a plateau, 1,000 ft. above sea level, devoted to sugar and tobacco.

Approaching Cayey, at 33.4 *m.* on the R. and L. are large sugar plantations, with the Central Cayey of the Eastern Sugar Associates like a lord's manor. In the distance, L., a serpentine road winds its way around the northern range of the CORDILLERA CENTRAL toward the Caribbean Sea on the southern coast (*see Tour 1C*). At 36.8 *m.* R. are the HENRY BARRACKS, a United States Military Reservation, named after General Guy V. Henry, first American Governor of Puerto Rico. The Spanish government maintained a post here to acclimate soldiers from the mother country. From early colonial days Cayey has been a center of strategic importance. It has maintained a martial prestige since the early days of depredations by the ambitious but always frustrated attacks of buccaneers.

CAYEY 37.8 *m.* (1,233 alt., 5,953 pop.), incorporated as a town in 1774, was originally named Cayes de Muesas, after Don Miguel de Muesas, governor of Puerto Rico from 1770 to 1776. At one time Cayey was one of the most picturesque towns in the Island. When tobacco was the main product of the region—sugar has superseded it—the surrounding countryside planted under cheesecloth cover gave the appearance of snowbanks on hillsides. Pack trains of sure-footed ponies and burros, descending almost

perpendicular mountain sides as they brought the tobacco crop to the town's warehouses, were a common sight.

Beyond Cayey the route follows a northwesterly winding course through the seemingly impregnable, steeply naked peaks of the Cordillera Central, with the LA PLATA VALLEY, once the richest tobacco section of the Island, watered by the sparkling La Plata River (Sp. Silver) far below.

This is the area which the PRRA chose in order to initiate its rural rehabilitation program. Just outside of Cayey to the right high on a hill appear the words PRRA NUEVO TRATO (Sp. New Deal) set off in white-washed rocks. All along the route may be seen the small varicolored concrete houses of the resettlers with their little truck gardens.

At 45.6 m. (R) is a concrete esplanade, built by the PRRA, from which is visible the La Plata Valley Resettlement.

At 46 m. is a side road.

R. on this road 1.8 m. to the LA PLATA VALLEY RESETTLEMENT.

The PRRA bought 4,322 *cuerdas* of land within the municipalities of Cayey, Aibonito, and Comerío which formerly belonged to the American Suppliers, a continental absentee corporation. These lands have been divided into 461 small farms, in each of which a concrete hurricane proof house has been constructed and turned over on a rental basis to former laborers or landless farmers.

The scrupulously-cultivated subsistence farms with their neat little houses, gaily painted tobacco barns, and hills landscaped against erosion, give the appearance of a miniature Rhine Valley.

Although tobacco is the principal product of the newly created farmers, they employ a system of diversification, devoting a large part of their land to the raising of minor tropical crops, vegetables for export to the United States, fruits and poultry. At the community central-service farm, resettlers are given instructions in scientific cultivation and animal husbandry. Selected seeds, plants, swine, goats, and poultry are distributed among them. In connection with the central-service farm, the resettlers have activities in

the various communities of a social, recreational, educational and health character.

AIBONITO (Sp. Oh how beautiful) 50 *m.* (1,896 alt. 3,877 pop.), known from early colonial days as Laybonitc and elevated into the status of a parish under the advocator of Saint Joseph in September, 1692, was officially incorporated in 1822. Its name is said to have sprung to the lips of the Spaniards when they first contemplated the crest of this lofty mountain range, the deep valleys of green velvet cut through here and there by glistening streams. The days are extremely pleasant and light wraps are a welcome addition in the cool evenings. During the winter, when night temperatures are sub-tropical, woolen blankets are a blessing.

It was at Aibonito that Spanish and American forces, facing each other and awaiting the battle command, received news of the armistice which brought an end to hostilities of the Spanish-American War in 1898 (*see History*).

From Aibonito the road climbs toward the southwest to further heights. Many are its turns and windings, among a bewildering diorama of flowers, trees, vines and mountain streams.

At 52.1 *m.* is EL ASOMANTE (Sp., the lookout) a point over 2,000 feet high and the top of the main divide of the Cordillera. Here also is a junction with PR 15 (*see Tour 1D*). This place served as a lookout during the early days and was a strategic point during the Spanish-American War. Some of the trenches built by the Spaniards are still visible. A great portion of Puerto Rico's topography is exposed to view, a vast map molded in earth and vegetation.

From El Asomante the route begins to descend in sweeping curves toward the southern coastal plains, passing through dense tropical foliage covering the narrow ridges

of the road where the earth drops more than 1,000 ft. on both sides.

A noticeable change in vegetation takes place as the road continues its winding descent. The brilliantly-green mountain vegetation gradually gives way to yellowish grasses, and coffee and banana trees to sugar cane and pastures. Far in the distance is visible a black dot in the deep blue Carribean—the island CAJA DE MUERTO, so named because of its coffin shape. Local tradition has it that this island is the original of Stevenson's Treasure Island.

At 60.5 *m.* the invading American forces in 1898 met their most virile resistance from the defending Spanish forces. The heroic Spanish commandant Martínez Illescas, though seriously wounded, gallantly commanded his meager force to resist and advance upon the far greater force of American troops. On opposite sides of the road are two small granite obelisks immortalizing the gallant conduct of both contingents who fought the only real battle of the whole Puerto Rican campaign.

At 60.7 *m.* a Spanish-built steel bridge crosses the Coamo River to COAMO, 60.9 *m.* (345 alt., 7,635 pop.), founded in 1580, one of the oldest towns of Puerto Rico, once the seat of Ponce's provincial government, originally known as La Villa de San Blas de Illescas. It lies pleasantly at the base of the southern foothills along the Coamo River, and its clean, paved streets and attractive nineteenth century parish church harmonize with the picturesque close-to-the street houses, and give a truly Spanish atmosphere.

At 62.3 *m.* is the junction with PR 21.

R. on this road is COAMO SPRINGS, 2.5 *m.*, reputed to be the oldest hot sulphur springs of the Americas, famous since the days of the Spanish Conquest. Tradition, with little historical foundation, claims this as the Fountain of Youth for which Ponce de León was seeking. According to legend the Boriquén Indians told him that this fountain was "far away to the west," whereupon he embarked for unknown lands, and accidentally discovered Florida, unaware

that these youth-restoring waters were to be found in his beloved Puerto Rico. The baths are reached by a long wooden ramp and stairway to the bottom of a hotel. The ruins of some of the earliest baths are still here, as well as the old conduits that carried the boiling waters out of the rocks, all surrounded by the outlines of what was once an orderly Spanish garden. Along a gallery that looks like an ancient cloister are the present baths, pits sunk in concrete. The average temperature of the water is about 113° F. (45° C.). Gases in dissolution per liter at 32° F. (0° C.) and 760 mm. pressure, are Nitrogen 13 cc 740; Oxygen 1 cc 761; sulphuric acid 1 cc 967. The fixed elements per liter of water are: Carbonic Acid, 0.01296; Calcium Sulphate, 0.79902; Sodium Sulphate, 0.52531; Potassium Chloride, 0.00031; Sodium Silicate, 0.08127; Sodium Carbonate, 0.03503; Iron Carbonate, 0.01114.

JUANA DÍAZ 73.1 *m.* (185 alt., 2,717 pop.), a quiet town founded in 1789, was the scene of some of the most virulent persecutions of the Puerto Rican liberals between 1879 and 1887—the epoch of the most intense political struggle, known as the years of El Composte (Sp. good behavior). The town was named for Doña Juana Díaz, a lady who donated the land for the location of the community, with the stipulation that the town should bear her name and that none of the municipal land should ever be sold or given away.

West of Juana Díaz are extensive coastal areas of sugar plantations. The PORTUGUÉS RIVER, is crossed at 80.8 *m.* before entering PONCE (53 alt., 65,179 pop.) 81.8 *m.* (see Ponce). At Ponce is the junction with PR 3 (see *Tour 2*).



Tour 1A

INSULAR INSTITUTIONS

Río Piedras—Junction of PR 1 with PR 46—Guaynabo—La Muda; 8 m. PR 46, 25.

Good macadam roads.

Bus lines and public cars connect all points.

PR 46 branches W. from PR 1 at 0 m., at a point 0.6 m. S. of the Plaza of Río Piedras (*see Tour 1*).

The INSULAR PENITENTIARY, 0.6 m. L. (*open 9-5*), is a modern four-story concrete structure built around a patio that serves as a recreation ground for prisoners. The penitentiary was erected in 1935 on 112 acres of rolling land that comprise the prison farm. The great rectangular building, covering about an acre, contains 332 cells and 12 wards, offices, a library, social hall, and dining room, school rooms where grade-school training is given, well-equipped hospitals, a photographic studio for finger-print analysis, laundry, bakery, and numerous prison shops. In a chapel on Sunday both Catholic and Protestant services are held. Above the portal of the main entrance is the inscription "Odia el Delito y Compadece al Delincuente" (Sp. Hate crime and pity the criminal). On massive blocks on either side of the entrance are symbolic figures of Justice and Law. There is a large athletic field for the prisoners, who organize their own sports program.

Scholastic and industrial instruction, under the supervision of the Department of Education, and practical and theoretical agricultural training, supervised by the Depart-

ment of Agriculture and Commerce, are given. In the prison shops carpentry, plumbing, mechanics, tailoring, barbering, tinsmithing, shoemaking, toy making, and broom making are taught; and vegetables and fruits are raised on the 80-acre model farm of the penitentiary. The men have organized a band for dances and festivals. About half the inmates have no occupation.

The institution is operated on a self-supporting basis, utilizing prison labor in the industrial and farm work of the penitentiary, and thereby reducing the Government's share of operation expenses.

The prisoners make furniture for the Department of Justice and for other Government offices; clothes, shoes, and hats for the inmates of the penitentiary and jails in the district, shoes for asylums of the Health Department, and brooms for the government offices and buildings.

For the confinement, discipline and separation of prisoners they are classified in groups of juveniles, reformable and irreformable, and for crimes against morals, life and property. Both solitary and communal confinement are provided for. Puerto Rico, however, does not have the violent type of criminal found in great cities of other countries.

The program of reform includes, where possible, the treatment and cure by doctors and psychiatrists of the injury or physical disturbance, moral or emotional, that was the determinate or influential motive of the criminal.

To reward reformable prisoners for their good conduct, labor, and interest in learning new trades, certain privileges are granted and a money compensation is given for their work, based on quality and quantity. Part of this compensation is sent to the family, part used for the purchase of necessary articles, and the rest retained by the institution until the prisoner finishes his sentence.

This model penitentiary is putting into practice the honor

system used in several institutions in the United States, by means of which prisoners worthy of the privilege are permitted to leave the building without the custody of a prison guard when it is necessary for them to attend to urgent personal affairs.

At 0.9 *m.* is the junction with PR 45.

R. on PR 45, 1.5 *m.*, is the ELEANOR ROOSEVELT DEVELOPMENT; and at 2.8 *m.* is the junction with PR 1, in Hato Rey, location of the racetracks (*see Tour 1*).

At 1.1 *m.* are the Psychiatric Hospital and Tuberculosis Sanatorium of the Insular Department of Health. To the L. is the PSYCHIATRIC HOSPITAL, a Spanish Renaissance building, within well-kept lawns and gardens. The entrance doorway, of Spanish design, with the seal of Puerto Rico in the lintel, is particularly attractive, executed in colored, glazed terra cotta. This well-equipped institution, accommodating 1,000, has a 105-acre farm intensively cultivated, largely by the inmates, affording them healthful outdoor activity. As part of the recreational life the institution gives garden parties and dances. The music is furnished by an orchestra composed of inmates, or the band from the penitentiary.

To the R. is the TUBERCULOSIS SANATORIUM. Within the several pavilions and cottages, provided with the most modern equipment for the treatment and cure of tuberculosis, 800 patients can be accommodated. The extensively cultivated farm and dairy assure the inmates a plentiful supply of fresh vegetables and dairy products. This well-ordered community resembles an attractive midwestern village in the United States, except for the many royal palms and other tropical vegetation.

At 3.1 *m.* is a junction with PR 25, now the route.

The new route leads away from the broad open pasture lands, but keeps within continuous sight of the irregular

lower foothills of the northern mountainous region far in the distance to the left, as it passes through a densely populated semi-urban community. About several estates, almost as pretentious as manors, are huddled little shacks, barren of paint but flaunting bougainvilleas or other bright-colored vines and flowers.

L. at 4.6 m. is a large cockpit, the GALLERA BORINQUEN. In this octagonal frame building is the arena, or amphitheatre, the sides lined with cushions, and the floor lightly covered with sand. Surrounding it are the ringside, grandstand, and bleacher seats, similar to those in a boxing arena. Inside a railed enclosure are numbered cages with glass fronts. After the contestants are paired according to weight, age, and experience they are placed one above the other in individual partitioned cages, awaiting their turn in the ring.

Among the prevailing colors of fighting birds are the *papelón* (light yellow), *pinto* (reddish with white dots or other shades), *camagüey* (milk white), *búlico* (gray), *giro* (yellow mottled), and *gallino* (a cock shaped like a hen and having similar colors). The enthusiasm awakened among cockfight fans by the color of the birds is indicated in popular verses,

Have you ever seen a fight staged by a cock with
beautiful tail, speckled, yellow, cream or burnt
red? These colors I have always liked best.

The larger birds are useless for fighting, and are classified as *manilos*. The *gallo inglés* (English-bred cock) is the best.

Before the fight starts, bets are taken; spectators discuss ardently the merits of their favorites; and attendants prepare the feathered gladiators, attending to the plumage and sharpening their spurs. As the fight starts, two men enter the pit, each one carrying a cock under his arm. At a sig-

nal from the referee the birds are released and the fight is on, lasting until one of the combatants is either killed or runs for his life.

At 5.4 *m.* is the BALDORIOTY PUBLIC SCHOOL, named for Román Baldorioty de Castro (1822-90) (see Literature). A native of Guaynabo, he was elected as deputy to the Spanish Cortes in 1870 after a long and bitter fight for political reform.

GUAYNABO (250 alt., 1,181 pop.), at 5.6 *m.* is a quiet town of rambling streets and flower-covered, red-roofed houses. Many of the townspeople are engaged in the dairy business, although the sugar industry is rapidly gaining a foothold in the surrounding territory.

From Guaynabo the route is over a relatively new road, which winds around the foot of low-lying hills and past grassy fields graced by stately royal palms. At intervals it affords glimpses of native country life—sometimes an ox-cart rambling down the road, or a jíbaro astride a small Puerto Rico horse, ambling along in a jogging trot.

At 8 *m.* is LA MUDA, junction of PR 25 with PR 1 (*see Tour 1*).



Tour 1B

THE GREAT CAVES AND TREASURE ISLAND

Caguas—Aguas Buenas—Cidra; 25.9 *m.* PR 5, 22

Good macadam roads. Winding route.

Hotels at Caguas, mountain resort at Cidra.

This route runs over the western end of the Caguas Valley, skirting the north central hills and penetrating into the very summit of the Sierra de Cayey in the eastern mountainous interior, affording a continuous change of vegetation, each peculiar to valley, hill, ravine, or highland.

West of Caguas (*see Tour 1*) the most important inland city, on Betances Street 0 *m.* the road passes large sugarcane plantations in various stages of maturity. The cane from this region is taken to the Santa Juana Central of the Eastern Sugar Associates, on the northeastern side of the valley. The crumbling brick smoke stacks rising above the cane indicate the former location of individual sugar haciendas of Spanish days. The flaming flowers of the hibiscus hedges along the road and the dark green of the irregular hills, far to the south, relieve the monotony of the pale green of the cane fields. As the route leaves the valley, it winds around hills planted in small tropical domestic crops such as plantains, yams, and pigeon peas.

At 6 *m.* is (L) the REST HOUSE OF THE AMERICAN REDEMPTORIST FATHERS, a handsome four-story concrete California Mission style building.

AGUAS BUENAS (Sp. good water) (500 alt., 2,515 pop.), 6.1 *m.*, founded in 1835, stands on a small terrace framed by a ridge of hills, overlooking the Caguas Valley and the surrounding mountain ranges. There is nothing of unusual interest in the town itself, but a short distance away is one of the remarkable sights of Puerto Rico—the Great Caves.

At 7.8 *m.* is (L) a junction with a bridle trail. (*Take heavy rough shoes, light sweaters, raincoats. Other supplies and guides to caves may be secured at the junction.*)

Left on this trail, which winds in curves and spirals up almost perpendicular ascents and down correspondingly steep slopes, are the GREAT CAVES, 1.2 *m.* These profound natural excavations, 1,000 ft. above the sea in a tropical setting, are as yet only partially

explored. The entrance is by way of a narrow gorge between great walls of rock, surrounded by luxuriant tropical vegetation. About 40 ft. below, at the bottom of this gorge, are yawning black mouths leading to the main cavern, or DARK CAVE. (*Avoid large black spiders, reputed to be poisonous.*) Opening out from various passages, where muddy, slippery floors make walking treacherous, are great chambers with tessellated ceilings and large stalagmites, tenanted by bats, whose wings in flight sound like the roar of mountain torrents. These creatures are harmless, and only add a weird note to the underground quiet. All around these chambers are deep holes going down to an undiscovered world of lost rivers, streams, falls and cascades, and vast halls and chambers of exquisitely-tinted stalactites and stalagmites, colored by blue and green mineral salts. It is believed that these caverns were used by the Island's aboriginal inhabitants as living quarters, a theory substantiated by the finding of human bones and utensils in the caves.

West of this junction, PR 5 skirts the rugged smaller hills of the eastern mountain ranges, at intervals crossing and paralleling the narrow and rocky Bayamoncito River. Deep wooded ravines, shaded by slender *guaba* trees that seem almost jungle-like, conceal cultivated coffee trees. Here and there dense clusters of fruit-bearing trees dot the hillside, sheltering native thatched huts. The cool mountain air makes the drive a pleasant one.

At 15 m. is a junction with PR 22, now the route, which parallels the Arroyo River for some distance. The mountainsides, completely denuded of trees, were under tobacco cultivation in former years, but now are used for pasture land or remain idle. Zigzag foot-paths lead to native huts precariously perched on the hillsides.

CIDRA 22.8 m. (1,312 alt., 2,500 pop.), was founded in 1809. For years it was lost among the crests of the Sierra de Cayey, PR 22 being its only outlet to the rest of the Island. Today there are several roads passing through it, and it is fast becoming a competitor of Cayey and Aibonito as a summer resort. Facing the town's plaza is the SAN JUAN NEPOMUCENO CHURCH, a brick and masonry structure with a simple barrel-vaulted interior.

At 23.3 *m.* is a junction with a graded road.

L. through pine fields the route leads to TREASURE ISLAND CAMPS, 1.8 *m.*, a delightful mountain resort commanding a wide panorama of the plateau. Tropical foliage, gardenias and other flowers beautify the rolling grounds. (*Cabins, with all modern conveniences; lodge serving food and drink; tennis, baseball, swimming and horseback riding.*) The camp site is far enough away from the public highway to afford privacy and seclusion. The climate is cool and healthy. Fresh vegetables and fruits grown on the camp plantations are served at the table.

At LAS CRUCES, 25.9 *m.*, PR 22, is the junction with PR 1 (*see Tour 1*).



Tour 1C

THE JÁJOME HIGHWAY

Cayey—Guayama; 16.2 *m.*, PR 4.

Macadamized roadbed.

This route crosses the northern range of the Cordillera Central, known as *Jájome Alto* (Sp. High Jájome), to the southeastern coastal plains. This sixteen-mile road, because of its even gradient over a difficult terrain, has been admired by numerous engineers, and because of the variety of scenery is one of the Island's favorite tourist routes.

South from Cayey 0 *m.* (1,233 alt., 5,953 pop.), (*see Tour 1*) on PR 4.

From this town, popular as a summer colony, and once a leading tobacco center, the road ascends southward along the steep wooded mountain slopes.

At 1.5 *m.* the road turns completely around, affording

one of the panoramas for which the route is noted. In the foreground lie the vivid roofs and dull streets of Cayey, while the radiating roads, their borders of trees dwarfed to hedges, sprawl across the countryside. The Cordillera Central stretches its vast ruggedness ahead, and to the right looms AIBONITO PEAK (2,313 alt.), grimly grey.

Beyond this point the highway becomes a veritable flower-lane, bordered with countless flowers and shrubs of both the temperate and tropical zones. The multicolored varieties of geraniums and begonias, the flaming poinsettias, the bright flowers of the hibiscus hedges, and vari-colored shrubs are set off by the deep green of the precipitous hillsides.

At 3.9 *m.* the road passes over a narrow plateau (2,225 alt.) that winds around the slopes. The crisp air and freedom from summer heat have attracted a large summer colony. On a hill (R) is the yellow-painted little CHAPEL OF SAGRADO CORAZÓN (Sp. Sacred Heart).

Just beyond (S) is a vista where land and sea appear to meet. Charming residences, with attractive gardens of multicolored plants and flowers, firmly grip the roadside, overhanging almost perpendicular precipices.

At 5.6 *m.* (R) is JÁJOME (*private*), the summer residence of the Governor of Puerto Rico. Used to lodge road workers in Spanish days, this brick and masonry structure, similar to others found along the Spanish-built roads in the Island, has been reconstructed and painted, and is attractively set off by a profusion of such exotic flowers, plants and vines as the passion flower, poinsettias, bougainvilleas, and tree ferns, growing beside old-fashioned northern lilies-of-the-valley, bridal wreath, narcissi, and sweet peas. From the wide veranda in the back is a view of mountain gorges that end abruptly in narrow valleys stretching for miles to the east and west. Through an opening between the mountains are visible the southern coastal lowlands running to

the Caribbean, with the small island, *Caja de Muerto* (Sp. coffin) faintly discernible off the coast.

At 7.1 *m.* (L) is a REPRODUCTION OF THE GROTTO AT LOURDES in a gorge. The cave and spring, in its setting of flowering shrubs and soft mosses, attracted the attention of summer residents, who erected the grotto in 1935 in honor of the Virgin.

For several miles the road continues to wind slowly around the slopes of the range where wild mountain scenery draws the attention even of the driver from the perilous roadway. Children, fair-haired descendants of early settlers of the region, strategically stationed at difficult curves where the car must slow up, sell flowers and native strawberries by the roadside, their cries, "*F-r-e-s-a-s-!*" (Sp. strawberries), "*M-a-r-g-a-r-i-t-a-s-!*" (Sp. daisies), carrying for some distance.

At 10.6 *m.* another panorama unexpectedly appears—the city of Guayama and the Central (sugar mill) Machete set in a broad pale green field of sugar cane, with the Caribbean in the background. From this point the road starts to descend under an arcade of interlacing *almácigo*, mango, *hucare* and flamboyant trees. The bark of the white *almácigo* (Sp. gumbo limbo, West Indian birch) is used for tea, and according to the *jibaro* is as nourishing as chicken soup. The *hucare* trees, resplendently covered with orange blossoms during early spring, give way in June to the flaming red of the flamboyant sprays, to relieve the monotony of the dark green countryside vegetation.

At 12.5 *m.* is a junction with a side road.

Right on this road to EL PUEBLITO DEL CARMEN, 3.9 *m.* (Sp. the little town of the Carmen), a mountain village, the area around which is devoted entirely to domestic minor crops, such as plantains, yams, cassava, pigeon peas, etc. Before the road was opened in 1938 the cost of hauling crops down the steep mountain trails was more than their value.

GUAMANÍ RIVER BRIDGE, 15.4 *m.*, spans the dry bed of a once turbulent river. Until 1914 its waters flowed southward through the pass and across the plain hollow to empty into the Caribbean near Guayama. Large scale operations of sugar plantations on southern lowlands demanded irrigation, and the Insular Government built an extensive irrigation service.

At the south end of the bridge is the junction with PR 64, a macadam road.

Left on PR 64 at 5 *m.* is the CARITE DAM, first of the irrigation dams to be erected by the Insular Government. It has a hydroelectric plant which serves several municipalities on the south side of the Island. The reservoir impounds the head waters of La Plata River. The dam forming it is an earth fill with stone facing placed in a narrow gorge through which the river used to flow. The maximum level of the stored water is 1,783 feet above sea level, and at this elevation the storage capacity is 11,500,000 cubic meters. The water from the reservoir passes to the south side of the Island through a tunnel 3,060 feet long cut through the mountain under the main divide and drops thence 1,105 feet through two successive hydroelectric plants into the bed of the Guamaní River to be diverted to the Guamaní canals. The average daily flow of the water from the reservoir is 28 cubic feet per second.

At 16.2 *m.* is GUAYAMA (74 alt., 16,910 pop.), on a plateau 4.6 miles from the southern coast. Although one of the oldest Puerto Rican cities, founded in 1790 by settlers possessing royal grants, it is notable for the absence of narrow and twisted streets that usually characterize older towns.

A tree-lined plaza, dominated by the elegant cream-tint facade of San Antonio Church, towering over small Spanish Colonial buildings, is the center of activities. From here streets radiate in orderly fashion, planned by the city fathers, who perhaps foresaw the possibilities of the community as an administrative and processing center and residential town. On the north side of the plaza is a small

tablet monument dedicated in 1920 in honor of the Ohio Volunteers who took the city in the Spanish-American War.

This community, with its five sugar centrales, is the center of a rich sugar-producing region. The fertile slopes and rich soil along the Guamaní River produce not only sugar cane but tobacco, coffee, corn, and bay trees, from the berries of which the essence of bay rum is extracted. Dairying and livestock farming also are increasing in importance. Guayama, besides being a processing center, is also an important distributing point, exporting raw and processed produce and importing manufactured articles through its twin Caribbean ports, Arroyo and Jobos.

SAN ANTONIO CHURCH, a handsome basilica-like structure with twin towers, an adaptation of Romanesque and Spanish Colonial architecture, faces the plaza. Built in 1873 on the site of an earlier chapel, the Church was a Pro-Cathedral (temporary seat of a Bishop) in Spanish days. The Bishop of Puerto Rico took up residence in Guayama while making his annual pastoral visit in the southern region of the Island. The parish is in charge of the American Redemptorist Fathers.

SAN ANTONIO PAROCHIAL SCHOOL, to the left of the Church, with an attendance of 200, is in charge of the Sisters of Notre Dame, American Province. The three-story building follows the Spanish Mission style.

CITY HALL, Martínez and Palés Sts., is a modern two-story structure, an adaptation of simple but attractive Spanish Colonial architecture. It houses the municipal offices of the sixth senatorial district for which Guayama is the seat.

GUAYAMA HIGH SCHOOL (R) Jobos St., an American Colonial concrete structure, was erected with funds supplied by the Insular Government. Besides the high school, there are seven urban, twenty-two rural elementary schools, one second unit, and one trade school in the community.

TORIBIO HOSPITAL, Hospital and Jobos Sts., is another modern adaptation of Spanish Colonial style. The two-story concrete building houses a complete, modern hospital with operating rooms, X-ray and analysis laboratories, and 50 beds in wards.



Tour 1D

HILL COUNTRY

Cataño—Bayamón—Toa Alta—Corozal—Comerio—Barranquitas—Orocovis—El Asomante; 41.3 *m.*, PR 1, 25, 24, 9, 15.

Macadamized road throughout.

This route traverses the region between the northern coastal lowlands and the mountainous central interior, passing over some of the highest elevations in Puerto Rico, affording views of long and narrow mist-filled valleys. Sugar cane, pineapples, citrus fruits, food crops, as well as dairies, prosper in the lower regions, while tobacco and coffee thrive in the sub-tropical climate of the mountain slopes and interior valleys.

At the junction of PR 1 with PR 25, 0 *m.*, R. on PR 25.

At 0.7 *m.* (L) is the ENTRANCE TO THE PUERTO RICO CEMENT CORPORATION, a modern plant with a capacity of 1,000 barrels per day, built by the PRRA and operated by the Insular Government, the Governor being the president of the enterprise. The product of the plant will result in a large and necessary saving in building construction, as wood for construction purposes is growing

scarcer, and termites and hurricanes play havoc with wooden structures.

At 2.4 *m.* is the junction with PR 24; L. on PR 24.

CATAÑO (5 alt., 6,845 pop.), lies in placid calm on the southern side of the bay of San Juan. The town was, until recent years, a *barrio* (Sp. district) of the municipality of Bayamón. Many of the townspeople make a living from fishing, and early in the morning picturesque fishing boats glide past El Morro Castle into the open sea. Many residents and water-front workers commute between Cataño and San Juan. (*Ferries every fifteen minutes; fare 5 cents*). From the bay is a splendid view of the Capital, perched high on a citadel with its imposing fortifications in the background. Pelicans soar over the water and plunge down with lightning swiftness in search of prey.

Between Cataño and Bayamón the route passes through some of the earliest explored lands in Puerto Rico.

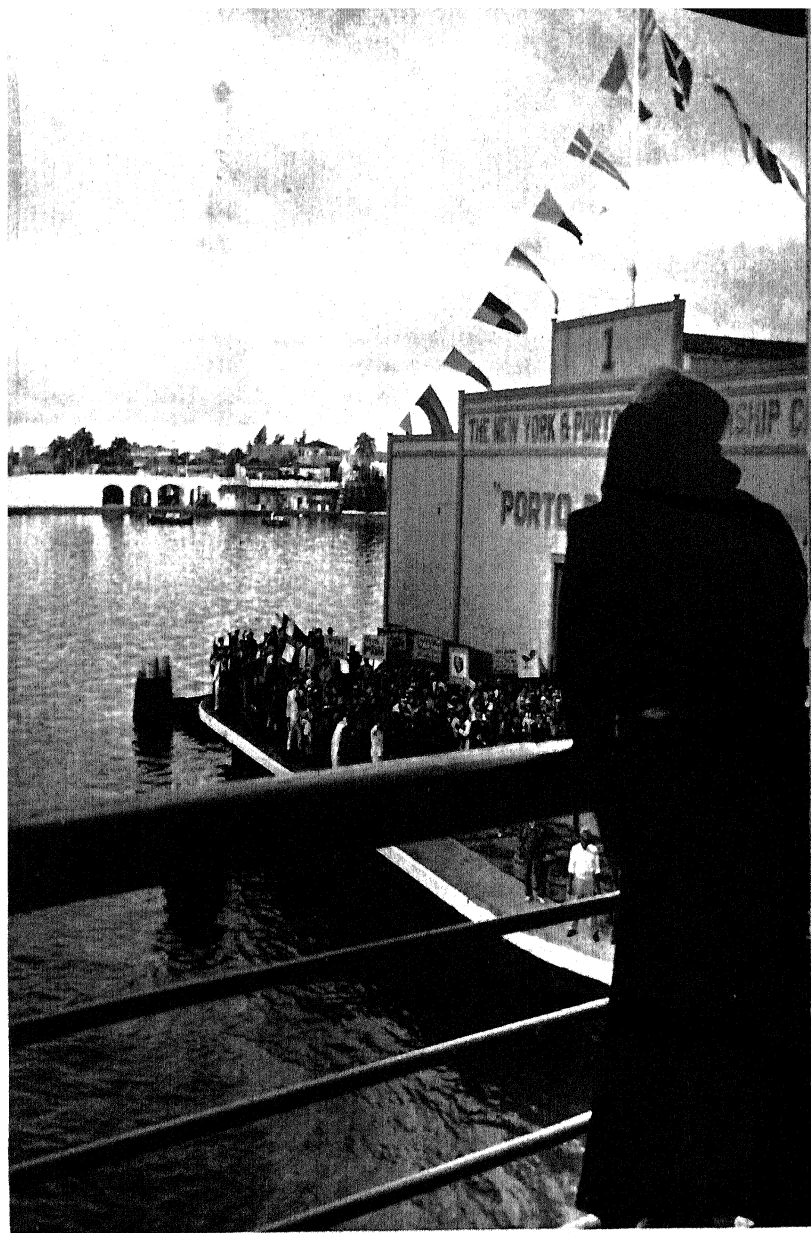
BAYAMÓN, 6.5 *m.* (54 alt., 14,596 pop.), lying on a meadow shadowed by the fantastic conical hills typical of this section, is the gateway to the interior and the west of Puerto Rico, and the northern terminus of the American R.R. Co. The city was originally located to the east of the present site, which was known as *El Alto del Embarcadero* (Sp. the elevation beyond the wharf). Construction of the CHURCH OF LA SANTA CRUZ (Sp. Holy Cross) in the plaza was begun in 1772, and the town was thus officially established. Facing the church is a large CAOBA (Sp. mahogany) TREE planted in 1905 by Agustín Stahl, the botanist. Novelties such as ash trays, cigarette cases, and boxes of various shapes and sizes are also manufactured of this wood.

The city has a somewhat shabby appearance, as it has been the victim of a long-standing sugar depression, and the hurricanes of 1928 and 1932 completely ruined the orange and grapefruit orchards. Before the days of motor ve-



Recreation





W. L. Highton

ARRIVAL AT SAN JUAN



CONDADO HOTEL

P. R. News Bureau

ESCAMBRÓN BEACH CLUB

P. R. Inst. of Tourism





W. L. Highton

MIAMI APARTMENTS



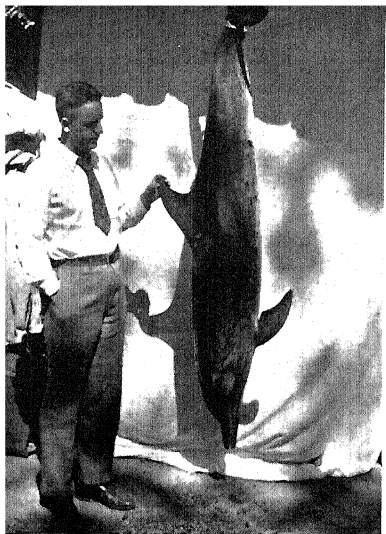
TREASURE ISLAND CAMPS

P. R. Inst. of Tourism

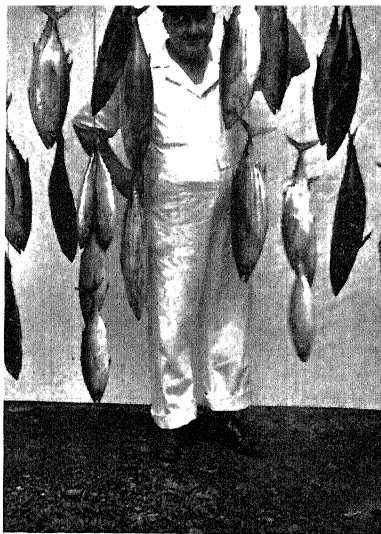
COAMO SPRINGS

P. R. Inst. of Tourism





PORPOISE HARPOONED
OFF MAYAGÜEZ



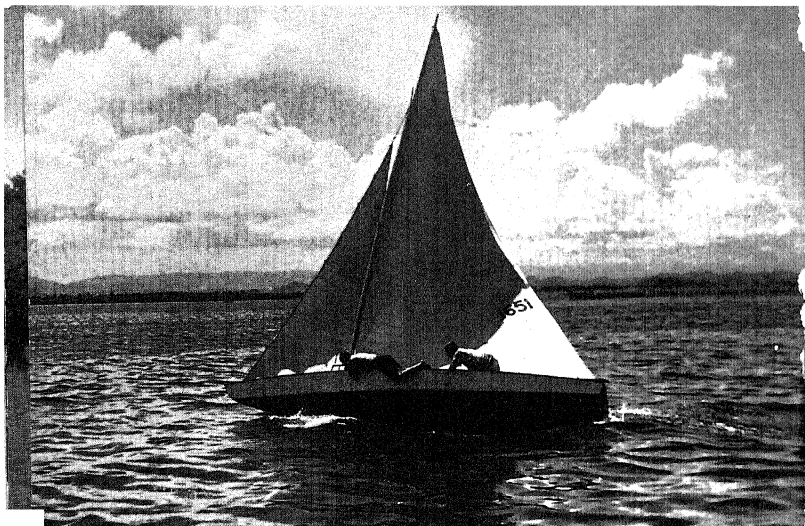
CATCH NEAR MAYAGÜEZ

U. S. Dept. of Agriculture

OFF TO FISH AT MONA ISLAND

P. R. News Bureau





SAILING

P. R. News Bureau

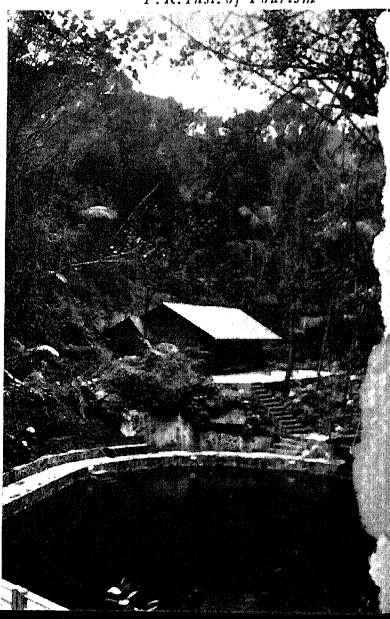
GOLF

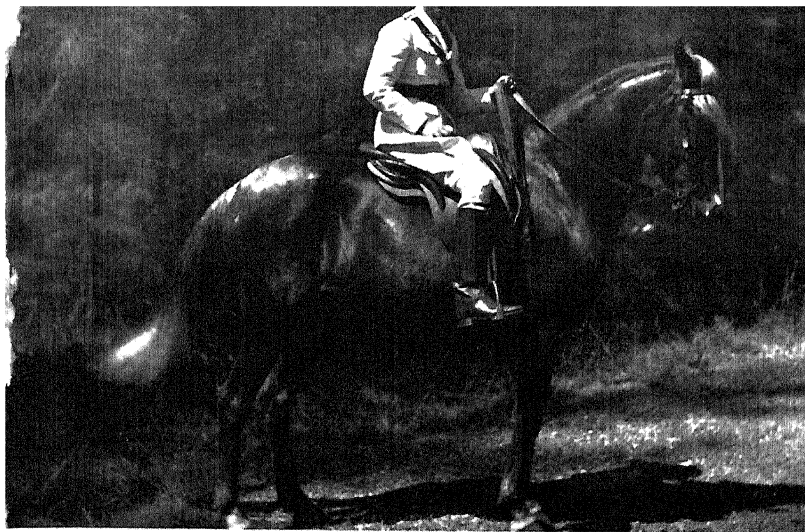
W. L. Highton



EL YUNQUE SWIMMING POOL

P. R. Inst. of Tourism



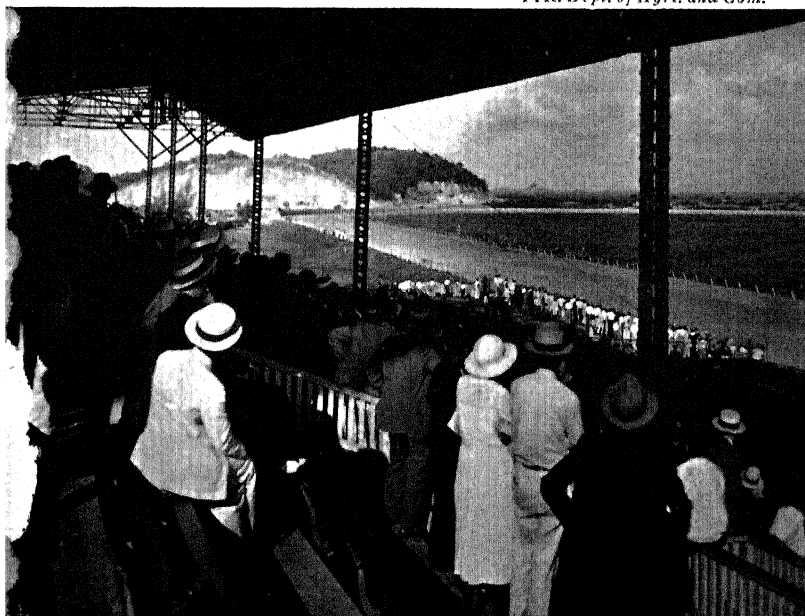


P. R. Inst. of Tourism

RIDING

HORSE RACING

P. R. Dept. of Agri. and Com.





REGIMENTAL BAND

Div'n. of Ter. and Is. Poss'ns

P. R. Reconstruction Adm'n.

NATIVE ORCHESTRA



hicles and cheap transportation, the *jíbaros* from the surrounding country, mounted on their wiry native ponies, their saddles covered with the *pellizas* (Sp. cord rug) distinctive to the Island, came to town on Saturdays to buy their supplies for the coming week.

Bayamón contributed two outstanding men of Puerto Rico: the painter Francisco Oller (1833-1917) and José Celso Barbosa (1857-1921), one of the founders of the Republican party (*see Government*).

At 6.7 *m.* is the junction of PR 9; L. on PR 9. At 8.2 *m.* is a junction with PR 42. Right on PR 42, the road passes through citrus-fruit groves, for the most part owned by continental Americans who settled here following the Spanish-American War in 1898, and skirts conical shaped limestone hills distinctive of the northern lowlands. The limestone in this region is widely used in road and building construction. At 7 *m.* is the little town of TOA ALTA (Sp. high estuary) (250 alt., 1,126 pop.) much of which was destroyed by fire in 1938. Founded in 1751, it was originally known as Ribera de Toa Alta or Toa Arriba. In 1797 the town sent militiamen to San Juan to resist the British. With little industrial and agricultural life, Toa Alta, like many of the small towns in the Island, has felt the exodus of population to the larger industrial centers. At Toa Alta PR 42 runs into PR 10.

COROZAL (250 alt., 3,305 pop.), 15 *m.*, is one of the larger communities in the interior of the northern foothills. Founded in 1795, the community was placed under the advocacy of *La Santa Familia* (Sp. the Holy family), the name of its church. The areas in the vicinity of Corozal have been mined for gold and platinum since early colonial days. There are also copper deposits.

PR 9 is carved along the precipitous mountainsides with the waters of La Plata river (L) coursing below. Native

cabins surrounded with fruit trees perch precariously on the hillsides.

At Christmas the inhabitants of these hills are seen along the road singing the traditional *aguinaldos* (Sp. carols; Puerto Rican, Christmas presents). Native musicians go from house to house, asking for gifts in their songs. Poetry of this sort, with its religious themes, doubtless had its origin in the Church during the sixteenth and seventeenth centuries. They sing of the Infant Jesus in the cradle at Bethlehem, the Shepherds, and the Three Kings.

Three Kings Day is one of the happiest in all Puerto Rico. On this day the children receive gifts from their parents, placed the night before under their beds in the name of the Three Wise Men. In the country, children place outside the door of the *bohío* (thatched hut) little baskets filled with grass for the horses of the Three Wise Men, expecting to find, in return, gifts for themselves. Later in the morning, after church services, parties of young people—some of them on horseback, others in automobiles, and the poorest on foot—go to the houses of their friends in the country where they are treated to refreshments. Dances are organized to last a day or two; gay songs are sung and the feeling of happiness runs high.

Much of the land in this region has remained idle ever since the decline of the tobacco industry in the Island. One of the main reasons for the decline is the fact that Puerto Rico produces a type of tobacco chiefly suitable for cigars, and since the early 1920's an enormous increase in the use of cigarettes in continental United States has reduced the demand for Puerto Rican cigars.

Tobacco has always been one of the three main crops of Puerto Rico. During normal years with no quota restrictions, the Island's production averaged from about 250,000 to 300,000 quintals. Formerly tobacco was planted under cover to develop light-colored leaves for cigar wrappers;

now all tobacco is planted without cover. Fields are planted from October up to January. There are different systems of planting: single rows in furrows, double rows in benches, and others. When the plant sends up its seed it is "topped," or excess leaves eliminated. Plants with too many leaves grow thin, small, and papery; vigorous plants with too few leaves develop large and coarse.

There are two methods of harvesting tobacco in Puerto Rico; cutting the whole plant, and priming. In cutting, the plants are sheared off at their bases with machetes and left in the field until they become less brittle as their moisture evaporates. The plants are then tied at the base with a string and hung in the curing bars. In priming, the ripier leaves are picked first, beginning with the lower leaves, following with the middle leaves, then the top leaves. Ripe leaves change in color to a lighter shade, under natural conditions. Women workers at the curing barns sew the leaves in pairs, back to back.

Tobacco harvested by priming takes about 40 days to cure, but tobacco harvested by cutting takes longer. The process of curing tobacco does not mean simply drying out the leaves. During the curing, changes in the composition of the leaves occur.

Four methods are generally followed in the curing process: air curing, fire curing, flue curing, and sun curing. Air curing, combined with fire curing in case of cold or damp weather, is the method used. After curing the leaves turn a reddish-brown.

When tobacco is properly cured and softened the bars are taken down from the barn, the strings cut at the ends, and the leaves grouped into a bundle or "hand." These bundles are packed into loads of one quintal, after being classified, and then fermentation takes place.

Cigar tobacco is subjected to a fermentation process before manufacture. This process removes the harsh, raw

taste of the leaves and develops flavor, elasticity, aroma, and uniformity in color. The fermentation causes sweating of the leaves and the loss of about nine per cent of weight. Changes in color also occur and the leaves lose some of their nicotine. During the entire process considerable changes occur in the chemical constituents of the leaves. When the fermentation is complete, the leaves are stripped, dried, and made into bales ready for shipment.

At 16 *m.* the road crosses a steel bridge over the rocky bed of the river. Here is the junction with PR 20.

R. on PR 20 on an uphill road is NARANJITO (Sp. little orange tree) (1,500 alt., 1,839 pop.) at 3.5 *m.* Founded in 1824 by Lieutenant Claudio Morales, the town, resting in the very heart of the rugged Cordillera Central, is popular because of its suitability for tobacco cultivation, the main occupation of the community.

At 19.9 *m.* is the HYDROELECTRIC PLANT of the Porto Rico Light and Power Company (*visitors welcome*), which supplies power to a large portion of the Island, including San Juan. At this point La Plata River becomes a large artificial lake. At the foot of the lake is a roaring, foaming spillway from which the river lazily winds its way toward the sea.

COMERÍO, 24.3 *m.* (500 alt., 2,322 pop.), is a small but active tobacco trading center, almost completely enclosed in hills that rise steeply from the town's edge. Compressed within this narrow valley, the town straggles down a narrow main street of busy stores and warehouses.

About the community are remnants of a forest of royal palms that gave the town its original name, Sabana del Palmar (Sp. palm meadow), when it was established in 1826. The royal palm is indigenous to the Island, and in 1925 the Puerto Rican school children adopted it as the National tree.

Beyond Comerío, the road winds through a denuded highland country, with little patches of tropical fruit forests

encircling the homes of the inhabitants. From a point at about 28.8 *m.* may be seen the section of the road known as LA CUESTA DE LA GUITARRA (Sp. the guitar hill), a crest where the road forms the outline of a guitar. The wild roller-coaster road sweeps across denuded shoulders on red clay hills and through brief, steep valleys where once tobacco was cultivated under cheesecloth covers that gave the landscape the appearance of a northern winter mountain scene.

BARRANQUITAS, 34.6 *m.* (2,000 alt., 1,698 pop.), is a quiet hill-cloistered town. Because of its location in the very heart of the Island and the delightfully cool mountain air it is a favorite summer resort. Well-kept homes and grounds dot the hillsides about the town. In spite of its comparative seclusion the community is active in the tobacco business, and there are many food crop farms scattered throughout the municipality. On Muñoz Rivera St. (R) is THE BIRTHPLACE OF LUIS MUÑOZ RIVERA (1859-1916). The adult life of this Island leader paralleled Puerto Rico's political history for thirty years. He had only an elementary education in the schools of Barranquitas. He early showed literary talent, but soon turned to politics, becoming president of the local committee of the Autonomist Party and a member of the municipal assembly. Later he was elected provincial deputy, the election, however, being voided by the Conservatives. As editor of *La Democracia* he conducted a campaign against monopoly and official corruption under the Spanish government. He became in 1897 president of the Autonomist (Spanish Liberal) Party, and founded *El Liberal*, its organ. Under General Brooks, the first Military Governor of Puerto Rico under United States rule, Muñoz Rivera headed the cabinet. Returning to the Island after a visit to the United States, he called for the formation of a new Federal Party. This party "accepted and applauded the fact of annexa-

tion," and asked for a Territorial form of government, with eventual Statehood. In February, 1900, municipal elections were concluded, the Federal Party winning in forty-five municipalities, the Republican Party in twenty-one. In the same year, however, a newspaper founded by Muñoz Rivera, *El Diario de Puerto Rico*, was suppressed and the printing plant destroyed by his political enemies. Thereupon Muñoz Rivera went to New York, where he published the *Puerto Rico Herald*, campaigning against the methods of governing the Island, and demanding civil liberties for its people. He returned triumphantly in 1902, and was elected to the House in 1906 and 1908. Beginning in 1910 he was for six years Resident Commissioner of Puerto Rico in Washington, where he never ceased presenting the point of view of residents of the Island to Congress. He worked for the passage of the Jones Bill, the Puerto Rico Organic Act that went into effect in 1917, without, however, all the liberal provisions recommended by him. Returning to Puerto Rico in September, 1916, he died a month later. Thousands of Puerto Ricans followed his funeral cortège from San Juan to Barranquitas, where he was buried. Scores of parks, schools, and public buildings named after him testify to the veneration in which this "Washington of Puerto Rico" is held. A great democrat and a staunch fighter for the liberty of his people, he found time to write poetry which is said "to give to the Puerto Rican lyre the string of bronze which it lacked." His home, a typical Puerto Rican-style frame house close to the street, has become a museum for many of his personal belongings. On his birthday, July 17th, an Insular holiday, crowds of pilgrims visit his tomb.

Northwest of Barranquitas on PR 15 at 10.2 m. is the little mountain town of OROCOVIS (1,500 alt., 2,005 pop.) almost in the geographic center of the Island. Like the neighboring communities it is popular as a summer re-

sort. Founded in 1825, it originally bore the name of Barros (clays). The main occupation is tobacco culture and stripping.

At 34.6 *m.* PR 9 runs into PR 15.

From this point the road passes across hills in sharp, winding ascents and descents. A splendid view of the Island topography stretches as far as the eye can see. Little individual farms predominate in the plateaus between the hills. As El Asomante is neared, the highway crosses an extensive plateau where some sugar cane grows.

EL ASOMANTE, 41.3 *m.* (2,000 alt.), is simply a group of modest homes lying at the junction of PR 1 (*see Tour 1*).



Tour 2

SEACOAST HIGHWAY

Río Piedras—Carolina—Canóvanas—Río Grande—Luquillo — Fajardo — Ceiba — Humacao — Yabucoa — Maunabo — Patillas — Arroyo — Guayama — Salinas — Guayanilla — Yauco — Guánica — San Germán — Aguada — Aguadilla — Isabela — Arecibo — Manatí — San Juan; 293.3 *m.* PR 3, 36, 39, 2.

Macadam roads throughout.

Local bus and automobile lines and public cars follow this route; or cars may be hired for the entire trip at moderate rates. The American Railroad roughly parallels PR 3 from Río Piedras to Humacao and PR 2 from Ponce to San Juan via Mayagüez and Arecibo.

Stations in intervening towns.

Good hotels in cities; elsewhere limited accommodations.

This tour offers a surprising diversity in both scenery and climate; from a historical point of view the towns are even more interesting than those of the interior. Time and again they were raided by pirates and foreign powers (*see History*). From Cape San Juan on the northeast to Cape Mala Pascua on the southeast extends a zone of wide plains which break abruptly from the mountains to the west. Of these, several ridges, including the Sierra de Pandura in Yabucoa, reach the shore line, forming impressive sea cliffs.

Section a. RÍO PIEDRAS to HUMACAO 52.5 m.

Intersection of Muñoz Rivera and De Diego Sts. Río Piedras (86 alt., 19,933 pop.), 0 m. (*see Tour 1*). Left on De Diego St. The route runs through a residential district to the city limits, 0.6 m., thence through a densely populated semi-urban countryside with fine residences, modest houses, and humble huts, all in a profusion of flowery shrubs and vines.

At 1.4 m. is the junction with PR 23 (*see Tour 2A*).

The route continues past grapefruit orchards and pastures. Palm trees (L) far in the distance mark the shoreline.

At 4.9 m. is the junction with PR 57, north of which are the Submarine Gardens at Boca de Cangrejos, 6.6 m. (*see San Juan*).

At 6.6 m. is the CENTRAL VICTORIA, owned by Rubert Brothers, the chief economic factor in the lives of the inhabitants of the region.

CAROLINA, 7 m. (39 alt., 5,214 pop.), lies along a level green plain and is centered about an attractive little plaza studded with Australian pines. Although established as a town in 1861 under the name of San Fernando de la Carolina, the community existed prior to 1851. The Catholic Church, dominating the plaza where several trenches

were dug by the local defenders during the Spanish-American War, served to lodge the troops of General Pedro del Pino overnight during their march to Fajardo.

RÍO GRANDE DE LOIZA BRIDGE, 10.3 *m.*, spans the wide pasture-covered estuary of the largest stream in the Island, which has its source in the hills near San Lorenzo (*see Tour 2A*).

CANOVANAS, 11 *m.* (39 alt., 3,559 pop.), settled as Loíza Nueva (Sp. New Loíza) long before its incorporation in 1910 under its present name, arose out of the partial abandonment of Loíza Vieja or Loíza Aldea.

At 11.4 *m.* is the junction with PR 44.

Left on PR 44 through sugar and pasture lands watered by the turbid Río Grande de Loíza. LOÍZA VIEJA or ALDEA (10 alt.) (Sp. Old Loíza or Village), 4.8 *m.*, is a small seacoast village. Situated at the mouth of the river, the community dates back to the pre-Columbian period, and was ruled by Doña Luisa, a Boriquén princess. The Spaniards occupied it in 1511, and from then until 1580 it was the scene of constant attacks by the Carib Indians from neighboring islands east of Puerto Rico. During one of the encounters, Doña Luisa, who had married Mexia, a mulatto who came over with the first crew of settlers from Seville, met a heroic death beside her husband. The square CHURCH OF SAN PATRICIO, on the north side of the plaza, with a bellcote over the façade, is a happy combination of simplicity and utility, but is greatly in need of repair. Vines and small trees cling to the unplastered exterior walls of lime and mortar, baked into solid masonry under the tropical heat of nearly four centuries. The high doors of native wood, studded with great nails, are hung on crude iron hinges. The dripping moss-covered interior has sheltered the inhabitants of the village during hurricanes. The red tile floor, although somewhat worn with time, is well preserved. The Church was placed under the protection of St. Patrick, perhaps the first house of worship in the New World named after the patron saint of Ireland. The selection of St. Patrick as patron was determined by lot, according to a local tradition. The choice failing to meet general approval, lots were cast a second and third time, but the name of St. Patrick continued to emerge. "Our saint has been good to us," say the parishioners, "and has protected us from storms and sickness." A statuette of red-bearded St. Patrick looks down from the main altar.

As the route continues directly eastward, the highway is lined with Indian almond trees, and the profile of the Luquillo Range becomes more accentuated. The Indian almond tree is indigenous to Malaya. The broad leaves are clustered at the ends of the branches, and the small flat fruit, 2 to 3 inches long, contains an edible seed.

RÍO GRANDE, 15.9 *m.* (39 alt., 2,298 pop.), is industrially dominated by the sugar and dairy industries. The general appearance of the town is one of pleasant living, with its large church erected in 1840 commanding a tree-lined plaza, attractive homes, and clean streets.

At 20.4 *m.* is MAMEYES, the junction with a Federal road leading to the Luquillo Range of the Caribbean National Forest (*see Tour 2B*).

At 20.5 *m.* PR 3 crosses a concrete bridge over the rocky Mameyes River. The road is bordered with *canafistula cimarrona* (*L. cassia grandis*), a cultivated tree plant, found generally in wild state along river banks near the coast, the wood of which is used for carpentry and cabinet-work.

East of this point the route runs close to the sea, past sparkling cove-like white sandy beaches fringed with coconut palms.

LUQUILLO, 24.3 *m.* (10 alt., 1,926 pop.), standing at the edge of the Atlantic Ocean, is fast becoming a bathing resort. To the left rises the rugged Luquillo Range. Industrially the townspeople depend on sugar growing. Although founded in 1797, the community has made little material progress through the years.

Between Luquillo and Humacao the area is entirely devoted to sugar. The country is dotted with numerous settlements of the several sugar centrales. A large proportion of the population here, as well as in most of the coastal region, are Negroes employed in the sugar fields.

Sugar cane was introduced in America by Columbus, and

brought into Puerto Rico from Hispaniola in the year 1516, marking one of the outstanding dates in the chronology of the Island (*see Agriculture*).

The first actual attempt at sugar manufacture in the Island started in 1548 when a crude type of sugar was produced by the most primitive methods. At first the juice of the cane was extracted by placing the cane stalks between two wooden grinders, driven by Indians and Negro slaves, later by horses and oxen. In the following year Father Diego Lorenzo taught the settlers how to build mills driven by water power. Many years passed before the first iron mills moved by steam were introduced. These first factories were crude affairs—nothing more than large kettles where the cane juice was boiled until it turned into a syrup thick enough to crystallize when cooled. This was called moscavado sugar. Improvements were gradually made, and at length in the large *haciendas* steam-driven machinery was introduced. Improved methods of evaporation of the cane juice and drying of the sugar in centrifugal machines were later adopted (for a description of the modern process *see Tour 1*).

A native of Luquillo was Rosendo Matienzo Cintrón (1855-1913), a leading figure in Insular politics, who left the Republican party and founded the Unionist party in 1904. He was a forceful and persuasive speaker.

Beyond Luquillo, PR 3 takes a southeastern course, veering slightly inward as it skirts the hills.

At 26.4 m. is the junction with an improved road.

Right on this road, which passes between denuded hills, is the ZALDUONDO PRRA RESETTLEMENT PROJECT, 1.3 m., a 1,526-acre farm subdivided into 123 one-*cuerda* farms for laborers, 35 twenty-*cuerda* farms for former landowners, and forty-*cuerda* farms for future settlers. This is one of the eight resettlement developments undertaken by the PRRA, for which 48,571 acres of land have been set aside in the various regions of the Island. This resettlement program aims directly at checking land concentra-

tion, crowding of slums, and the need for importation of foodstuffs. When it is completed, more than 12,000 new homes will have been built, and many families will for the first time be producing a good part of their food supply while living under standards heretofore unknown to them (*see Tours 1, 4, 2B*).

At 30 *m.* is the DISTRICT HOSPITAL for the Seventh Island District, made possible through grants of Federal funds.

At 30.6 *m.* is the junction with PR 59.

Left on PR 59 is FAJARDO PLAYA (Sp. Fajardo Beach), 1.4 *m.*, the port of Fajardo, shipping sugar and lime. The people of this community live mostly by fishing, although some work is afforded them in the surrounding cane plantations and at the Hicaco Limestone Mine. This is one of the ports of embarkation for the Islands of Vieques and Culebra (*see Tour 5*).

FAJARDO, 31.1 *m.* (32 alt., 6,511 pop.), set in an extensive valley, is predominantly a sugar center. Hub of the rich northeastern sugar lands, the city has a prosperous air. In the environs is the FAJARDO CENTRAL, the third most important sugar enterprise in Puerto Rico, operating on 47,000 acres from Loíza to Fajardo.

Founded in 1774 by a number of Spanish soldiers, Fajardo still retains something of its colonial aspect. The City Hall, facing the plaza, is a two-story building of Spanish Renaissance architecture. The Catholic Church, overlooking the plaza, is of severely plain limestone construction, and was built in 1878, replacing an earlier building.

Fajardo was one of the few communities in the Island that saw action in the Spanish-American War. It was taken by the Americans and recaptured by the Spaniards. On August 8, 1898, the U.S.S. *Puritan* anchored off the Fajardo Lighthouse. Several sailors under the command of Lieutenant H. S. Dresset came ashore, but in the face of a superior military force of Spaniards, returned aboard. On the following day the *Puritan* was joined by the *Amphi-*

trite, *Leyden*, and *Hannibal*, and the Americans took possession of the lighthouse, a brick structure 100 feet long by 40 feet wide. On the 5th, Dr. Santiago Veve Calzada approached the American authorities at the lighthouse and urged the seizure of Fajardo. The playa was then taken by the Americans who, in the company of Veve and other American sympathizers, marched on the city and took it without firing a shot. Meanwhile the Spanish troops had retired to Carolina. Dr. Veve was made military governor of the Eastern District of the Island. On August 7th a contingent of Spanish soldiers under Colonel Pedro del Pino recaptured the town and playa but were repulsed by the fire of American vessels from an attack on the lighthouse, which had become a refuge for the families of several sympathizers of the Americans. Fajardo remained under Spaniard rule until September 30, when it was occupied by American troops under the command of Captain L. H. Palmer.

Among the well-known native sons of Fajardo are José Celis Aguilera (1827-93), abolitionist, and advocate of "the greatest possible decentralization within the national unity"; Eugenio Benítez Castaño (1878-1918), co-founder of *La Revista de las Antillas*; and Antonio R. Barceló (1869-1938), president of the Liberal Party and of the Insular Senate, a dominant political figure in Puerto Rico for thirty years.

South of Fajardo the road winds among sugar fields close to the sea, and on a clear day Culebra Island, 15 miles off the coast, is visible.

At 33.2 m. PR 3 parallels a cove-like shore line, with the lower hills of the Luquillo Range jutting into the sparkling blue of the sea.

CEIBA, 35.7 m. (36 alt., 1,627 pop.), was incorporated as a town in October 6, 1836, ceasing to be a barrio village of the municipality of Fajardo.

At 36.8 *m.* is the junction with PR 60.

Left on PR 60 to ENSENADA HONDA (Sp. Deep Bay), 2.7 *m.*, one of the best natural harbors in the Island. A motor launch from here makes the trip to Culebra and Vieques (*see Tour 5*).

Between Ceiba and Naguabo Playa the highway runs over a number of smaller hills covered with sugar cane. Giant jobo trees line the roadside. The jobo or hog plum (*L. Spondias mombin*) is a large tree growing 40 feet high, used for stakes and fence posts, very durable because they take root. It is probably due to this fact, also characteristic of the *almácigo* (*Bursera simaruba*) more than to any specially favorable quality as a shade tree, that they are so commonly found along the roadsides. The wood of the jobo is used for fuel and the fruit for making preserves.

NAGUABO PLAYA, 43.3 *m.* (20 alt., 1,474 pop.), is a port for the shipping of sugar. Along its one long street are summer residences overlooking a quiet cove, the nearby island of Vieques, and several islets.

At 44 *m.* is the junction with PR 28, leading to Naguabo, 1.4 *m.* (250 alt., 4,109 pop.) (*see Tour 2B*).

South of this junction the road runs almost on the beach, and crosses seven bridges which span the palm-lined lagoons opening into the sea. This marshy section is the habitat of thousands of edible crabs, easily caught at night.

HUMACAO PLAYA, 46.6 *m.* (11 alt., 2,062 pop.) also called Punta de Santiago (Santiago Point), is the shipping point for the sugar produced in the area. About a mile out from the harbor is the small island of SANTIAGO (*no visitors*) where the School of Tropical Medicine (*see San Juan*) maintains a monkey colony for experimental purposes. In October, 1937, the colony was started with eight gibbons, which under expert care have flourished and multiplied. The purpose of this activity is to raise conditioned animals of a known history for medical research.

HUMACAO, 52.5 *m.* (53 alt., 8,407 pop.), the metropolis of eastern Puerto Rico, lies in a broad valley which extends from the northern range of the Cordillera Central on the southwest and the Luquillo Range on the northeast. The city's streets, bordering the plaza, bustle with activity, as befits the seat of the Seventh Senatorial District. Century-old structures, with doors opening directly to the street and barred windows and decorative balconies, contrast with pleasant residential suburbs. Descendants of the early city fathers still direct the town's affairs.

Founded in 1784 and declared a *villa* in 1881, Humacao was incorporated as a city in 1894; it was named after Jumacao, an Indian chief. The first settlers lived on the banks of the Dagua and Macao rivers, a site selected by Diego, Christopher Columbus' brother, in 1514. It was burnt by the Caribs, and another settlement which arose later along the borders of the Humacao River met the same fate.

Humacao is a prosperous sugar and tobacco center. There are two *centrales* in the immediate vicinity. The Humacao Needlework Co. employs several hundred women. La Bejuca Ebrey Chemical Works manufactures castor oil which is extracted from castor beans grown in this district.

A number of well-known persons have been closely associated with Humacao, either as natives or through long residence. Anita Otero, pianist, and her father Ignacio Otero were outstanding in music circles. Joaquín Massferrer, statesman and writer; Víctor Burset, lawyer and representative to the Insular Chamber; Domingo Quijano, educator and editor; and José Lloréns Echevarría, editor, were noted for their liberal ideals during the waning days of the Spanish regime.

The Casino Hispano-Puertorriqueño and the Community Welfare Club are leaders in Humacao's social and cultural

life. The community has a high school, three urban, twenty-six rural elementary schools, and a second unit, which, together with San José Parochial School, serve about 4,200 students. The PLAZA is an attractive enclosed square in the heart of the city. SAN FERNANDO CHURCH, standing at the east end of the Plaza, is an adaptation of Romanesque and Spanish Colonial style. The VICTORIA THEATER, at the west end of the Plaza, is a three-story structure with elaborate decorations.

The MUNICIPAL HOSPITAL, a large airy structure in modified Japanese style, at the end of Rosario St., was dedicated in 1920. The ORIENTE CLINIC, on Las Piedras Road (L), occupies what was formerly the large mansion of a rich sugar planter. The RYDER MEMORIAL HOSPITAL (R), is a group of Mission style buildings set on a knoll overlooking the countryside. With a capacity of 60, the hospital offers general medical treatment, and maintains a nurses' training school.

Section b. HUMACAO to PONCE 72 m.

The southern coastal lowlands are homogeneous in physical and economic aspects. The area is almost perfectly level from Patillas on the eastern end to Ponce. Since it is one of Puerto Rico's naturally driest regions, nearly all the land is under irrigation, and as a result it is the most productive region of the Island (*see Resources and their Conservation*). About 75,000 acres are planted to sugar cane, watered by public irrigation systems and privately owned pumps that tap underground water. The whole economy of the region, given over to large sugar-cane plantations operated by peon-type labor, illustrates the effects of land concentration and absentee ownership. Two of the largest sugar mills of the Island have their lands and mills in this area. Private individuals also own and

operate large farms and mills devoted to the production of sugar.

At 1 *m.* PR 3 crosses a concrete bridge over the Humacao River which placidly flows eastward to empty into the Vieques Passage.

CENTRAL EJEMPLO, 1.4 *m.* (L) a large sugar mill owned by the Roig family, affords work to many people in Humacao and vicinity.

The highway continues over rolling hills covered here and there with sugar and pasture. At 5.5 *m.* it crosses the hills and descends La Cuesta de la Cuchara (Spoon Crest), from where it enters the rich Yabucoa Valley.

At 9 *m.* is CENTRAL MERCEDITA (L) operated by the Roig Family, to which most of the sugar grown in the valley is brought. About the factory is an attractive village of the central employees and field laborers.

YABUCOA, 9.4 *m.* (53 alt., 4,174 pop.), is a hilly town overlooking the extensive sugar meadow of one of the most beautiful of the many coastal plains of Puerto Rico. It was completely destroyed in the hurricane of July 26, 1825. The only building left standing was the yellow, weather-beaten Nuestra Señora de los Angeles Church, on a hill above the town, in which the townspeople took refuge. The town has been slowly rebuilt.

South of Yabucoa the road climbs to the top of the rocky PANDURA RANGE separating the vast eastern and southern plains of the Island. The Yabucoa Valley is visible far below as a broad green plain, framed by the rugged peaks to the N. and S., and by the green-blue waters of the Caribbean on the west and the Atlantic on the east.

At 12.7 *m.* is the main divide of the range from which is a magnificent view of the Caribbean on the south side of the Island. At this point the road begins to descend rapidly among great boulders perched on precipitous hillsides. Along the route are small unpainted houses shaded by

tropical trees such as soursop, breadfruit, tree ferns, and clusters of coffee trees.

MAUNABO, 15.4 *m.* (39 alt., 1,044 pop.), resting at the foot of the range, is typical of small Puerto Rican coastal towns, with many unpainted frame houses and a handsome Catholic church overlooking a tree-shaded plaza.

At 16.9 *m.* is the junction with a dirt road.

Left on this road is the MAUNABO LIGHTHOUSE, 1.5 *m.*, situated on a headland at Pt. Tuna and overlooking the cove-like port of Maunabo.

PR 3 winds around headlands which jut out into the sea.

At 18.1 *m.* is CAPE MALA PASCUA (Sp. Bad Easter). A hundred feet below waves dash high against the sides of the cliff. From this point is an impressive view of the southeastern coast where the Atlantic meets the Caribbean.

Beyond Cape Mala Pascua PR 3 takes an inland course, passing between brush-covered hills until the resettled marginal lands of the Lafayette Project are reached, 24.9 *m.*, where the countryside is dotted with the small farms and houses of peasants resettled by the Puerto Rico Reconstruction Administration.

PATILLAS (Sp. watermelons), 26.6 *m.* (68 alt., 2,265 pop.), founded in 1801, has drab houses and bare, shaded streets. The surrounding country is green with cane. The road winds over the low hills and flat pastures where graze the oxen of the sugar plantations. Here is the junction with PR 12 (*see Tour 2A*).

At 29.1 *m.* is the junction with a side road.

Left on this dirt road is LA ENRIQUETA PLANTATION, 0.5 *m.*, the site of the home of Samuel F. B. Morse's father-in-law. At this old Spanish hacienda the inventor made some of his early telegraphic experiments in 1849. The foundations of the pole used for his experiments remain, but the house has disappeared. The plantation is now the property of Central Lafayette, and the site of the

Morse home and gardens has been turned into a park and named after the inventor.

CUATRO CALLES (Sp. Four Streets), 29.9 *m.* is a crossroad village. Here is the junction with a graded road.

Right on this road is CENTRAL LAFAYETTE, 0.5 *m.* This sugar mill was bought by the Puerto Rico Reconstruction Administration for the benefit of small planters and field laborers. The Central, with properties covering three municipalities, Maunabo, Patillas, and Arroyo, under French ownership for almost a century, was acquired in December, 1936. This property was entirely absentee-owned, both as regards national and insular economy, an impelling factor in its selection for purchase. The property includes a modern raw sugar factory of 2,500 tons daily grinding capacity, 10,040 acres of land owned and approximately 8,000 additional acres under lease. The property also includes railroads, rolling stock, work cattle, and other material and equipment essential for operation. The Central was turned over to a group of industrial and agricultural co-operatives whose members included the farmers and workers long dependent on Central Lafayette for their livelihood, and who, under this plan for co-operative purchase and operation, have been afforded an opportunity to acquire the property out of earnings over a period of years. The lands have been divided into a series of estates, each not exceeding 500 acres, owned by co-operative members, each holding a share in the undivided estates. On marginal lands adjoining the cane fields, moderate homesteads, with small but comfortable concrete houses, have been created for the laborers of the community as part of the PRRA's rural rehabilitation program. Here the families are given the opportunity for gardening and for raising small livestock and poultry, to increase their income and provide a better balanced diet.

A modern distillery to convert sugar cane syrup into solvents has been built as a part of the general program designed to find new industrial uses for sugar cane and its products.

A modern hospital provides medical service for all workers and their families. Supervised recreation and playgrounds are an important part of the program. The PRRA, through the Lafayette project, is endeavoring not only to create a new economic and social situation among those directly affected, but to provide certain social objectives. Its experiments in increasing the profits from the sugar industry will, it is hoped, point the way for a readjustment of the underlying factors controlling this important source of the Island's wealth.

The Project has so far proved economically and socially successful.

At 31.6 *m.* is the little seaport town of ARROYO (Sp. creek), (20 alt., 4,446 pop.), chartered in 1855. Years ago retired New England sea captains settled here and built houses with captains' walks on the roofs. Even today this architectural influence may be detected in many of the houses, reminiscent of those in old Massachusetts seaports. Some of the houses were actually brought in sections from New England. It was here that Major General John R. Brooke and a contingent of American troops landed in 1898 and advanced toward Cayey. The pleasant aspect of the community reflects its industrial stability. Central Lafayette and surrounding sugar plantations, as well as a large rum distillery, afford employment to a majority of the inhabitants.

At GUAYAMA, 36.2 *m.* (*see Tour 1C*), is the junction with PR 4 (*see Tour 1C*).

Between Guayama and Ponce the road is for the most part bordered by bamboos, creaking as they sway with the breeze. Irrigated pale-green cane fields extend on the left almost to the sea; while to the right on the brown, parched hillsides are scattered desolate-looking houses. Occasionally water stands are passed, where at certain hours of the day people receive their allotment of water. A number of large sugar centrals are the sole livelihood of the population.

At 42.5 *m.* is CENTRAL GUAMANÍ. At this point PR 3 crosses a concrete bridge over the dry river bed of the Guamaní River whose waters have been diverted for irrigation purposes. Despite the dryness and heat of this region, breezes off the Caribbean to the south make the drive a comfortable one.

The highway continues past extensive plains under sugarcane to the left, with the Cordillera Central looming beyond pasture lands to the right.

At 45.7 *m.* is COQUÍ, a nondescript settlement typical of the southern sugar plains. Here is the junction with an improved road.

Left on this side road is CENTRAL AGUIRRE, 2 *m.*, the second largest sugar enterprise in the Island, controlling 34,800 acres of some of the richest sugar lands in the Island, perhaps of the world. The factory faces Jobos, one of the best harbors of the Island.

SALINAS, 49.7 *m.* (23 alt., 2,512 pop.), incorporated in 1851, is one of the more prosperous towns in Puerto Rico, as much of the Island's sugar capital is concentrated here. Its wide paved streets, attractive city hall, municipally-owned high school, and other buildings give it a pleasant air. In the environs are numerous caves where Indian relics have been found; these have been but little explored. In addition to sugar, salt, and cattle, the town has a few small industries. On the north end of Salinas is the junction with PR 47, a new road leading to Cayey (*see Tours 1, 1C*).

West of Salinas is a large number of coconut groves.

SANTA ISABEL, 57.2 *m.* (26 alt., 2,055 pop.), chartered in 1841, is a community of undistinguished appearance. The rich sugar lands around Santa Isabel are concentrated in a few hands. According to the 1930 census there are only 16 farms in the whole municipality, and two of them include 97 per cent of the total area developed as farms. Here is the junction with PR 77 leading to Coamo Springs (*see Tour 1*).

PR 3 runs west under a low-hanging arch of acacia trees. On the left sprawl hut villages of Negroes who work in the sugar plantations.

At 63.9 *m.* is the junction with PR 61 leading to Juana Díaz (*see Tour 1*).

In PONCE, 72 *m.* (53 alt., 65,179 pop.) (*see Ponce*), is the junction with PR 1 (*see Tour 1*).

Section c. PONCE to MAYAGÜEZ, 54.3 m.

The topography now has greater diversity. Tertiary limestone hills with little or no vegetation extend close to the shore line. The highway runs parallel with the railroad for some distance across dry, level country covered with parched grass where large herds of oxen from the sugar corporations graze. The motorist speeding over these plains cannot fail to wonder at the healthy appearance of these herds, but this brown grass is excellent for cattle.

At Ponce, 0 *m.*, is the junction with PR 6.

North from Ponce on PR 6 to the junction with PR 2, 0.7 *m.* Left on PR 2 over brush-covered tertiary hills and parched countryside relieved by the shiny green foliage of innumerable calabash trees to PEÑUELAS, 8.8 *m.* (250 alt., 1,421 pop.), situated on a low point surrounded by hills, a small community with unimpressive dwellings, stores, and bare plaza with the attractive modern Renaissance San José church. Founded in 1793, the town sent militiamen to San Juan to resist the British attack on the Island in 1797. During a fire in Ponce in 1820, the citizens of Peñuelas aided in arresting looters from that city.

West of Ponce on PR 36. The highway runs under a canopy of acacia trees. Hills on the north dominate the extensive coastal plains to the left, covered with sugarcane as far as the shoreline on the Caribbean.

At 2*m.* (L) are the ruins of an old moscavado sugar mill now used for a stable. Spanish-built brick irrigation canals parallel the road.

From 5.6 *m.* to Tallaboa PR 36 skirts white limestone headlands which jut into the sea, forming an undulating shoreline.

TALLABOA, 9.8 *m.*, is another sugar central settlement set at the foot of tertiary hills, serving as a shipping point for sugar. Gas line tanks of the Texas Oil Company are

to the left near the bay. The Insular Department of Education maintains a second-unit rural school here.

West of Tallaboa PR 36 takes an inland course, passing a waste land of underbrush and cactus groves.

At 12.9 *m.* is one of the many shoreline vistas for which Puerto Rico is noted—a spectacular landscape of chalk-like cliffs of limestone rising far above the green-blue of the Caribbean.

GUAYANILLA, 15.8 *m.* (49 alt., 2,385 pop.), situated in one of the earliest explored lands in the Island, was settled in 1511 under the name of Santa María de Guayanilla, given by Lieutenant Miguel del Toro, aide to Ponce de León. According to the Melgarejo Report of Puerto Rico, dated 1582, the settlement was completely wiped out several times by the Caribs and French corsairs, the inhabitants having to move to San Germán. Father Nazario, the historian, holds that it was here that Columbus first landed in Puerto Rico. When Yauco was founded in 1739, Guayanilla, then a village of fishermen and cattle raisers, was placed under the jurisdiction of Yauco. The present town, incorporated in 1830, lies at the base of a rocky headland with window-like openings, called “whistling windows,” through which the sea breezes blow with a whistling noise. The town’s cove-shaped harbor is well protected, and is exclusively a sugar port for the nearby centrals Rufina and San Francisco, which contribute largely to the town’s subsistence. Its main street is lined with pink-flowered laurel trees, and its plaza and houses are trim and well-kept.

North from Guayanilla at 16.9 *m.* is the junction with PR 2; west on PR 2.

YAUCO, 20.7 *m.* (104 alt., 9,491 pop.), was founded in 1739. Several streets, straggling down the hillside on which the town is built, have flights of steps leading to a

poor district. Tile-roofed houses of native hardwood, with carved pillared verandas; massive one-story limestone commercial buildings, and cobblestone sidewalks just wide enough for one person, are reminders of colonial days.

Although Yauco was largely settled by Corsicans, the Spanish influence soon absorbed them. Yet the Yaucanos heartily co-operated in the independence movement during the waning days of Spanish rule.

About the large, well-kept, foliated plaza and modern church is clustered the city's business district. Nearby are century-old homes with doors opening directly on the street, and with flower-filled patios.

The city has always been the leading coffee trading center of Puerto Rico, and Yauco coffee is considered the best grown in the Island. In recent years, sugar cane has taken over much of the coffee lands. Here in the midst of cane fields are visible the ruins of once-spacious Spanish haciendas.

North of Yauco is the junction with PR 16, leading to Maricao and Lares (*see Tours 4, 4A*).

At 22.5 m. (R) is the MONUMENT TO THE SPANISH VOLUNTEERS, a small white concrete cross with a bronze tablet, erected in 1930 by the Spanish veterans of the Spanish-American war. It marks the spot where a contingent of Spanish and American soldiers had a skirmish.

At 22.9 m. is the junction with PR 39, now the route.

Northwest on PR 2 at 10.3 m. is SABANA GRANDE (Sp. Great Plain) (280 alt., 4,119 pop.), lying at the base of the lower hills of the Cordillera Central, and devoted to sugar and coffee cultivation. Officially incorporated in 1812, the community is dominated by a handsome church of Grecian lines. During the Spanish American War, after the retreat of constituted authority, the townspeople set up a government of their own for 12 days until it was attacked and captured by the troops of General Schwan. The terrain around Sabana Grande suffers greatly from soil erosion, and as a result much of it remains idle.

South on PR 39, the route passes an extensive plain entirely devoted to sugarcane, the roadside shaded by an arch of old flamboyant trees.

At GUÁNICA, 27.1 *m.* (23 alt., 3,063 pop.), American forces under Major General Nelson A. Miles first landed in Puerto Rico. A day later a contingent composed of seven companies of Massachusetts and Illinois volunteers met a Spanish column, and the latter retreated to Yauco. Originally settled in 1510 by Don Cristóbal Sotomayor, Guánica was part of Yauco until 1914, when it was made a municipality by an act of the Insular Legislature. The town is rather faded in appearance, and the houses are plain and unpainted.

ENSENADA, 28.9 *m.* (80 alt., 4,055 pop.), on the western side of the lake-like Guánica Bay, the best-protected harbor of Puerto Rico, is the site of GUÁNICA CENTRAL, the Island's biggest sugar enterprise. Soon after American occupation the mill was erected by American capitalists, operating 29,000 acres of land extending west from Ponce and as far west as Añasco. The galvanized iron buildings, including the mill, warehouses and engine barns, stand close to the water's edge, in order to facilitate the shipping of sugar. Around the Central has been built an attractive New England-type town for the sugar mill officials and employees. American influence is apparent in the pine-shaded streets, American-style houses, hedged gardens, and white fences.

Northwest of Ensenada is the driest area of the Island, a region of semiarid expanses, broken only where irrigation has made cultivation possible. It is a region of comparatively great distances, thinly populated, and offers little of interest except from a scenic standpoint. Calabash and tamarind trees to the R. lend a dusty green tinge to the brighter green of the cactus and acacia trees on the L. near the shore. Far in the distance is the southern skyline.

At about 37 *m.* is an undulating country marked by wind-mills, used to pump water from wells for the cattle of the sugar centrals.

LAJAS is at 40.4 *m.* (250 alt., 3,182 pop.). Incorporated in 1883, the town was named Lajas (Sp. slate) for the great amount of slate found in the vicinity.

North of Lajas the route is over a hilly region mostly given over to minor crops and some coffee. Breadfruit trees are numerous.

SAN GERMÁN, 41.9 *m.* (244 alt., 6,280 pop.), lies in a verdant valley within the Santa Marta hills. Although the community has shared in the rapid industrial and agricultural expansion of the Island, it still retains both the physical appearance and serene atmosphere of old Spain. Massive old structures with decorative verandas, elaborate cornices, and grilled windows, typical of the Mediterranean style, characterize the old town, and in its environs are large sugar fields and coffee and tobacco plantations.

Originally settled in 1512 in Añasco on the southern coast, it was named after Sainte Germaine of France. After Columbus' son Diego had chosen the site, the settlement became the port of call for Spanish ships bound to the Mother Country. It was here that Santa Rosa de Lima, the first American saint, was born, but while still a child her parents took her to Peru, where she later founded a convent.

After repeated plundering and burning by French privateers the town ceased to exist on this site, and in 1570 Governor Francisco Solís and the remaining dwellers of the old settlement founded the present town and called it New Salamanca, after Salamanca, Spain.

On a knoll overlooking the plaza is PORTA COELI, said to be the oldest Christian edifice in the New World. This ancient church, although not in use at present, is well preserved. The main altar and beautifully carved wooden pil-

lars are still in place, as well as the sounding board of the pulpit and massive entrance doors.

Segundo Ruíz Belvis (1829-67), a native of San Germán, was a co-worker of Betances (*see Cabo Rojo*). Accused of instigating an uprising in the military post at San Juan, he and Betances were ordered to appear before the court, but both managed to escape to St. Thomas, Virgin Islands, thence to New York. Ruíz Belvis soon thereafter went to Chile, where he died. Another native of San Germán was Francisco Mariano Quiñones (1830-1908), signer of the memorial to the Spanish Government requesting the abolition of slavery in Puerto Rico, and president of the Executive Council under the autonomous government.

The Polytechnic Institute of Puerto Rico, of which Jarvis S. Morris is president, is a nonsectarian, coeducational, liberal arts college, founded in 1912 by Reverend John W. Harris, D.D., and adjoins the town of San Germán. The institute started as an elementary and secondary school. Its property is valued at approximately \$1,000,000 and includes a 260-acre site, with 17 modern concrete buildings, an athletic field, basketball court, and a farm producing eggs, meat, and vegetables for the school community. The college has a total registration of about 300. Athletics, music, social and religious services, scientific and literary club work, dramatics, and forensics are part of the student's life. The purpose of the founder, a missionary of the Presbyterian Church, was to establish a "private educational institution free from sectarian tendencies." At first the school was operated as a grade and high school, but since 1927 it has functioned as a full-course college. An industrial work program is included in the course of study for all students and nearly all the college buildings, partly financed by Carnegie Foundation grants, have been constructed by student labor.

Polytechnic graduates include two mayors; a commis-

sioner and a sub-commissioner of education; fifteen college and university professors; twenty-five ministers; two superintendents of nurses; ten high school principals; twenty grade school principals and more than 100 teachers in public and private schools.

In San Germán is the junction with PR 2, now the route. At 47.9 *m.* is a junction with Eureka Road.

Right on this road at 1.6 *m.* is HORMIGUEROS (281 ft. alt., 1,959 pop.), the site of the Shrine of Our Lady of Monserrate, comparable to St. Anne de Beaupré in Quebec, Canada. Visible from a great distance is the yellow, hightowered church, placed like an ancient castle on a hillside guarding the town, a nearby sugar mill, and the western coastal plains, broken by hills. According to legend, in the early part of the seventeenth century, while a farmer was working in a field where the church now stands he saw a mad bull rushing toward him. He called on Our Lady of Monserrate to protect him, and immediately the Virgin appeared, whereupon the bull fell on its knees, giving the young man time to escape. In thanksgiving he had the shrine erected in honor of Our Lady of Monserrate. This incident is depicted in an old painting by the noted Puerto Rican artist Campeche (*see Painting*), which hangs in the church. Annually on September 8th, the town is the scene of a religious pilgrimage. On this occasion the faithful climb the long flight of stone steps, leading to the church, on their hands and knees.

Northwest of the junction with the Hormigueros road the view covers miles of the western coastal plains that, to the R., gradually narrow down to meet the mountains on the far northern horizon, and to the L. broaden near the shoreline, broken at intervals by numerous streams that drain into the Mona Passage. Fertile alluvial soils, level topography, and plenty of favorably distributed rainfall, make sugar the most important crop in this region of large plantations. There are also limited areas devoted to grazing, for the oxen used in hauling sugar cane and the cows from dairies in the neighborhood.

At 48.9 *m.* is the junction with PR 18.

L. on PR 18 to CABO ROJO (Sp. Red Cape), 4 *m.* (82 ft. alt., 26,059 pop.). Chartered in 1774 by a royal decree of 1771, the town became an active trading center when its port Puerto Real was opened to foreign commerce. In 1841 the port was closed and the customs activities were transferred to Mayagüez, in order to rebuild the latter city which had been completely destroyed by fire (*see Mayagüez*). Its diversified industries of tobacco, sugar, coffee, salt, straw work, and fishing made it one of the more prosperous towns in the past century, as reflected by handsome old homes with delicate carved woodwork over doorways, and the substantial large church. In Cabo Rojo was born Dr. Ramón Emeterio Betances (1827-98) (*see Literature*), statesman, abolitionist, conceiver of the Confederation of the Antillean States, Cuba, Santo Domingo, and Puerto Rico. Betances died in Paris, and his remains were brought to his native land in 1919, where they rest at the base of a granite bust monument in the town's plaza, erected in 1926 by popular subscription in the three sister islands. Betances was the champion of the underprivileged, especially the slaves. In 1858 he and several friends bought young Negro slaves at the church yard in Mayagüez, and set them free. The slaves were purchased before baptism, as their price doubled after their souls were saved. Cabo Rojo is also the birthplace of Salvador Brau (1842-1912), writer, poet, and historian (*see Literature*), appointed Official Historian of Puerto Rico in 1908. The pirate Roberto Cofresí was also a son of Cabo Rojo, making his headquarters in the Island of Mona (*see Tour 6*). He caused much trouble to Island authorities before being captured and brought to El Morro in San Juan where he was executed March 29, 1825.

At 4.3 *m.* is the junction with PR 66 (R) leading to Puerto Real, 2.6 *m.*, the once prosperous port of entry of western Puerto Rico, now an undistinguished fishing village of small, crowded dilapidated frame shacks, quite in contrast to the natural beauty of the surrounding countryside.

From the junction with PR 66, PR 18 continues over a pleasant hilly countryside, characterized by picturesque tile-roofed small houses to the port of BOQUERÓN 11 *m.* Across the bay are the Cabo Rojo salt mines, reached by rowboat, an hour's trip.

At 49 *m.* is the junction with PR 78, an alternate route to Hormigueros, 1.4 *m.*

At 51.3 *m.* are mango-tree groves in sugar fields. These Mayagüez mangoes are reputed to be the best of the Island.

At 53.7 *m.* the Yagüez River is crossed.

At MAYAGÜEZ, 54.3 m. (16 alt., 50,371 pop.) (*see Mayagüez*) is the junction with PR 27 (*see Tours 4, 6*).

Section d. MAYAGÜEZ to AGUADILLA 25.4 m.

Northwest of Mayagüez, 0 m., PR 2 is a splendid boulevard lined with tall, heavily-foliaged Indian almond trees. On both sides of the highway the tropical vegetation is dense, broken at times to the L, and affording glimpses of the sea.

At 5.7 m. is CENTRAL IGUALDAD (L).

At 5.9 m. is the junction with PR 73.

Right on PR 73 at 1.9 m. is AÑASCO (23 alt., 3,050 pop.). Founded in 1733, the town was officially approved in 1773, although by 1703 there existed a small village in the plantation of Don Luis Añasco, its founder. In the Guarobo (now Añasco) River Chief Urayoan and his men drowned Diego de Salcedo, a Spanish soldier. To discover whether the Spaniards were mortals, they held the soldier under water for a long time, then watched his body for several days until finally convinced that he was dead. Thereupon the Indians revolted. Here, in a locality originally known as Yagüecas, took place the last rebellion of the Indians in 1511, who retired to the interior hills after their leader had been killed.

Northwest of this junction PR 2 bends and dips over the headlands, at intervals affording glimpses of MONA PASSAGE, which separates Puerto Rico from the Island of Santo Domingo.

RINCÓN, 14.7 m. (16 alt., 1,531 pop.), the most westerly point of the Island, was founded in 1770. This small town on a headland has attractive houses, gardens, a shaded plaza, and an exceptionally well-cared for Catholic Church. In Rincón was performed the first civil marriage in Puerto Rico, in 1894.

Beyond Rincón PR 2 draws away from the sea and skirts hillside farms sown to minor crops. The road is lined with fruit-producing trees such as the mango, breadfruit, plantain, coconut, and soursop. Rather suddenly it descends

to a plain broken here and there by numerous bamboo-lined streams flowing to the sea. The fertile region by the shore has many groves of citrus fruit, protected from high winds by rows of Australian pines.

At 20.3 *m.* is AGUADA (23 alt., 1,922 pop.), depending solely on sugar growing. Its main street, shaded with Australian pines, is bordered by brightly-painted frame houses. Its plaza is dominated by the old San Francisco Church, recently remodeled, with towers 82 feet high.

In pre-Columbian days a village close to the site of modern Aguada was ruled by the powerful Indian chief Aymamón. Local historians maintain that Columbus landed here, but other communities along the northwestern part of the Island also claim the honor. In 1506, Vicente Yáñez Pinzón, ordered to colonize the Island, stopped at Aguada, where he loosed a few goats and pigs. According to Tomás de Córdoba the town was founded in 1506. In 1508 Ponce de León stopped here. In 1511 after Guánica was burned, many of its settlers came to Aguada, the name of the town being changed to Sotomayor. In 1527 the community was rebuilt by the Franciscan friars, but was wiped out two years later by the Caribs, who burned the convent and the Chapel of the Espinar. By 1534 there were no signs left of the settlement. In 1595 Drake called here, and in 1625 the vessels of Hendrick Bowdoin, who had seized San Juan, paused at the town. In 1775 Aguada was made a *villa*, and the construction of the church was begun in 1793. During the siege of San Juan by the British in 1797, an attack on Aguada failed. In 1825 the people of Aguada aided Aguadilla in repulsing a group of Colombians who attempted to make the Island independent. In 1912 the municipal archives were destroyed by fire, a serious loss to the archives of the Island.

At the foot of Colón St. an unimproved road through a coconut grove leads straight ahead 0.7 *m.* to a CROSS marking the landing

of Columbus' party on November 19, 1493. From this point there is a fine view—to the L. Desecheo Island thrusts from the sea, and to the R. is the shoreline of Aguadilla, with imposing Cape Borinquen in the background.

Beyond Aguada PR 2 winds in gradual ascent, skirting denuded hills shaded here and there by large mango trees.

At 21.4 *m.* is a striking view (R) of an extensive valley in pasture and sugar, property of the CENTRAL COLOSO, a large sugar central with the impressive Cordillera Central in the background.

At 24.7 *m.* is the junction with PR 8 (*see Tour 4A*).

AGUADILLA, 25.4 *m.* (9 alt., 13,465 pop.), seat of the Third Senatorial District, is the gateway of the northwestern interior region of the Island. Founded in 1775, it is situated at the base of a series of calcareous hills jutting into the sea. The Spanish Colonial architecture, the esplanade-like plaza dominated by the Catholic Church, pleasant homes, and quaint narrow streets with well-stocked stores and warehouses give the city a prosperous air. It is the trading center for a rich agricultural, densely populated area. The principal products are sugar, coffee, fruits, tobacco, and cigars. Excellent hats are also manufactured here. The city is connected by railway with San Juan and other towns. A large sugar central, on the outskirts of the city, gives employment to several thousand people. The harbor, which was made an open port in 1815, is reputed to be one of the best in the Antilles, but due to the undertow it must resort to lighterage service. It is suitable for deep-sea fishing.

Among the foremost Puerto Rican leaders who were born here were Dr. Agustín Stahl (*see National Setting*), scientist and author, and José de Diego (*see Literature*), militant advocate of independence.

In addition to a high school there are three secondary rural units, four urban, and 19 rural elementary schools; as

well as a parochial and secretarial and commercial school.

At the intersection of José de Diego and Muñoz Rivera Sts. is the SITE OF EL OJO DEL AGUA, where, some Aguadillans say, Columbus replenished the water supply of his caravels at a spring which continues to flow in the center of the city. The town's name Aguadilla (little watering place) commemorates this event.

Left from Aguadilla on PR 72 at 0.9 m. is PARQUE DE COLÓN (Sp. Columbus Park), on the banks of the Culebrinas River, where a cross marks the supposed spot of Columbus' landing. The Puerto Rico Reconstruction Administration has constructed a parkway along the river bank (*bathing, dancing, boating*).

Section e. AGUADILLA to ARECIBO, 35.8 m.

Northeast of Aguadilla, 0 m. PR 2 cuts through calcareous hills resembling weatherbeaten, ancient city walls.

At 2.3 m. is the new District Hospital (R).

Directly north PR 2 passes a diversified country of sugar and pasture land and farms growing minor crops. Much in evidence is the *Pomarrosa* or rose apple tree and the hat palm tree. The rose apple, introduced from the East Indies, is a bush-like tree producing an apple-shaped fruit, and the wood is used for barrel hoops and straw work. On the hat palm or Yaray tree grow leaves used in making hats and straw articles.

ISABELA, 12.2 m. (164 alt., 2,810 pop.), was chartered in 1819. Built on a hill, the town is centered about a flower-bordered plaza. Its pink town hall and buff church contrast with the blue sky and green countryside. This community, which has resisted the inroads of the sugar corporations, consists of small irrigated farms under diversified and intensive cultivation. Such a variety of foodstuffs are grown—corn, pigeon peas, dasheens, and other minor crops—that the region is called the granary of Puerto Rico.

Born in Isabela was Manuel Corchado (1840-84),

deputy to the Spanish Cortes in 1872, a renowned speaker and a tireless worker for political reform in Puerto Rico and Cuba.

Beyond Isabela the countryside, somewhat heavily populated, is divided into small individual farms, each farm growing some sugar, tobacco, and vegetables, with little groves of coffee under the fruit and plantain trees, the Spanish bayonet along the road serving for fences.

At 17.2 *m.* the highway crosses a steel bridge over the GUAJATACA RIVER.

At 17.7 *m.* (L) is a splendid view of the sea. Below on the shore line a railroad tunnel cuts through a massive limestone headland, and spectacular rock formations are brilliant with bright green vegetation. A roadside open-air restaurant takes advantage of the charming site.

QUEBRADILLAS (Sp. Small Creeks), 19.4 *m.* (372 alt., 2,113 pop.), chartered in 1823, is on the gentle slant of a hill with an attractive tree-shaded plaza.

At 19.6 *m.* is the junction with PR 34.

Right on PR 34 is LAKE GUAJATACA, 8.5 *m.* (*overnight accommodations at a small inn and private houses; moderate rates*), a large artificial lake constructed by the Insular Government to supply water for an irrigation system covering the northwest agricultural region of the Island. Surrounded by a range of calcareous mountain peaks, this area is a favorite spot for excursions and picnics, with spring drinking water and no mosquitoes. Hunting and fishing are prohibited, as this is a fish and fowl reservation (*see Resources and their Conservation*). Here is the junction with PR 8 (*see Tour 4A*).

For the next 12 miles the road passes through sand dunes and cacti that gradually give way to coconut groves and sugar plantations.

CAMUY, 26.9 *m.* (20 alt., 2,098 pop.), situated on the Camuy River, which served as the northern dividing line between the Division of Puerto Rico and San Germán during the early days of the Conquest, was officially incor-

porated as a town in 1807. Here occurred a riot between anti- and pro-slavery sympathizers in 1873. In the environs is CENTRAL RÍO LLANOS of the Soller Sugar Company, producing an average yearly sugar crop of 7,748 tons, a major factor in the life of the community.

HATILLO, 28.2 *m.* (20 alt., 2,611 pop.), is a small community of plain frame houses and sugar and coconut plantations.

The region beyond Hatillo is interspersed with coconut groves extending to the water's edge, and irrigated sugar fields to the right.

ARECIBO, 35.8 *m.* (22,132 pop.), is a thriving community sprawled over a flourishing sugar cane country, bounded on three sides by the mountains of the Cordillera Central, and on the north by the Atlantic.

San Felipe de Arecibo, one of the oldest cities of Puerto Rico, was incorporated as a town in 1616. In 1556 a few colonists settled along the banks of the Abocoa or Arecibo River, and by 1580 was founded the hermitage of Nuestra Señora del Rosario (Sp. Our Lady of the Rosary), and the small fort San Miguel (Sp. Saint Michael) had been built on what is known today as Víctor Rojas Parkway. At the end of the eighteenth century the village had 700 families, whose principal occupation was the cattle industry.

In 1702 British invaders met defeat at the hands of the Puerto Rican militiamen under the command of Captain Correa. This victory won for the city the official title "Most Loyal," bestowed by King Philip V. The city came to be known as La Villa del Capitán Correa.

About 1860 there was in Spain a political group called the Isabelinos, followers of Queen Isabela II, whose reign was reactionary and undemocratic. Arecibo had some influential Isabelinos, for on November 29, 1861, a statue of the Queen was erected at the plaza; but in 1898, because of the enthusiasm of the townspeople over the change of

regime, the statue was removed to the lobby of the city hall, where it stands today.

Sugar cane, coffee, and other products are grown in the neighborhood, and many large swamps have been drained and reclaimed to form rich cane fields. Two large centrals are important factors in Arecibo's agricultural and industrial life. A large coffee area in the interior is made accessible by excellent highways. It is fast becoming a citrus fruit center. A large distillery of a well known brand of Puerto Rican rum is located here.

The port of Arecibo is wide but unprotected, the anchorage being merely an open roadstead. Improvements are under way to provide a safe port for docking facilities. The city has railway facilities for San Juan and Ponce, and it also has well constructed roads leading to all parts of the Island.

There are a high school, three second unit schools, nine urban and forty-seven rural elementary schools, a parochial school, and an Old People's Home.

The VICTOR ROJAS PARKWAY, along the water front on the site of Fort San Miguel, honors the memory of an intrepid sailor of Arecibo, noted for saving lives at sea. The SAN FELIPE CHURCH, on the Plaza, is a large stucco and brick building. On MUÑOZ RIVERA PLAZA is an obelisk erected to the memory of the statesman. The U. S. CUSTOMHOUSE on Coll y Toste St. is a small pink stucco building of modified Mediterranean architecture. The PRESBYTERIAN CHURCH is on Diego St.

Section f. ARECIBO to SAN JUAN, 53.3 m.

East from Arecibo, 0 m., PR 2 takes an inland course, and the interior mountain ranges reappear in the background; while in the foreground are the cane fields with large sugar mills standing out conspicuously at intervals.

At 0.3 m. is the junction with PR 6 (*see Tour 4*).

Right on PR 6, passing through a sugar plain fringed by the brush-covered northern limestone hills, to 3.2 *m.* Right on an improved road to CENTRAL LOS CAÑOS, 3.5 *m.*, a sugar factory bought in 1939 by the Sociedad Cooperativa Azucarera Los Caños (Sp. Sugar Co-operative Association), a co-operative of *colonos* (planters from the Plazuela Sugar Company) through a PRRA loan of \$617,000 to be repaid during a 30-year period. During the World War, Central Los Caños was the property of the Pavensedt Land Company, a German firm. The Central was confiscated by the Federal government, placed on sale at public auction, and was bought by Don Eduardo Georgetti, founder of La Plazuela Sugar Company.

At 11.3 *m.* is the junction with PR 26.

Right on PR 26 is FLORIDA, a barrio, or district, dedicated chiefly to citrus fruits.

PR 2 continues past large sugar plantations to the junction with PR 35, 13.9 *m.*

Left on PR 35 to BARCELONETA (Sp. Little Barcelona), 0.1 *m.* (23 alt., 1,618 pop.), a pleasant community of modern homes, small stores, schools and a municipal hospital. Barceloneta is the birthplace of José A. Balseiro, poet, writer and educator, a leader in insular literary circles; and of Sixto Escobar, the world's bantam-weight boxing champion. Here is located CENTRAL PLAZUELA, a locally-owned sugar factory, producing an annual average of 33,000 tons. PALMAS ALTAS (Sp. Tall Palms), 4 *m.*, is the fort of Barceloneta.

At 16.3 *m.* a long steel and cement bridge crosses the placid Manatí River, upon whose grassy, mall-like banks cattle graze.

At 18.1 *m.* is the junction with PR 11 (*see Tour 3*).

MANATÍ, 18.3 *m.* (91 alt., 8,087 pop.), is another of the more prosperous communities, with substantial homes and buildings, incorporated in 1738, and a judicial district seat until 1820. Sugar, tobacco, coffee, and citrus fruits

are products of the municipality. The large CENTRAL MONSERRATE, property of the Calaf family, is the source of livelihood for many residents of Manatí.

Left from Manatí on a side road at 3.1 *m.* is LA LAGUNA DE TORTUGUEROS, of particular interest to botanists, because within a radius of one mile may be found twelve species of plants not known to exist elsewhere.

Between Manatí and Vega Baja the road traverses limestone hills whose perpendicular rock formation walls resemble ancient fortifications. Rows of coconut palms are visible along the seashore.

At VEGA BAJA, 26.2 *m.* (29 alt., 4,645 pop.), founded in 1776, PR 2 follows the main street, lined by substantially constructed buildings. Its large handsome church faces a flower-adorned plaza. At the northern end of town is a popular bathing beach.

In Vega Baja was born Julián Blanco (1830-1905), a prominent member of the Lares Rebellion of 1868. He was the last president of the Sociedad Económica de Amigos del País.

Creative Textiles, Inc., founded in 1937 in an abandoned fruit building in Vega Baja, manufactures made-to-order rugs. Started because of the increasing difficulty of obtaining high quality hand-tufted, sculptured rugs from the Far East, it is an answer to the demand of United States buyers for a source of hand-made rugs nearer the mainland. An outstanding piece of work was the manufacture of the large crescent-shaped rug for the platform of the Federal building at the New York World's Fair. This 50-foot, hand-tufted, sculptured rug was designed by Walter Dorwin Teague and was three months in the making.

East of Vega Baja the route traverses Puerto Rico's most important citrus fruit district, a region of great agricultural diversity. Sugar cane and pineapples, as well as

food crops and pasture, grow in this area. For much of the distance the road follows, slightly inland, the windings of the Cibuco River.

VEGA ALTA, 31.6 *m.* (120 alt., 3,192 pop.), was founded in 1775. The Inmaculada Concepción Church at the plaza has a rather unimpressive exterior, but the interior appears to have remained unchanged for centuries, except for the electric light fixtures. Above the altars are rustic wooden statues.

At 36.5 *m.* is the junction with PR 53.

Left on PR 53 to DORADO, 3.7 *m.* (23 alt., 2,328 pop.), at the mouth of La Plata River, which has its origin high in the mountains of the Cordillera Central near Cayey (*see Tour 1*). The region around Dorado was explored for gold during early colonial days and even today the La Plata is occasionally prospected.

East of Vega Alta PR 2 winds through a pleasant green valley cut by several broad streams and broken by calcareous hills that resemble ancient Inca masonry. On both sides of the road are large citrus-fruit orchards and fine estates.

At 39.3 *m.* is the junction with PR 52.

Left over a green lowland at 2.4 *m.* is TOA BAJA (Sp. Low Estuary). The community, although incorporated in 1747, had existed since 1511 as the site of a royal grange and an experimental farm (*see Agriculture*). The Church here is among the oldest in Puerto Rico.

Beyond this point PR 2 winds between limestone cliffs, amid heavy undergrowth, and emerges in a broad grass-covered plain to BAYAMÓN, 46.2 *m.* (54 alt., 14,596 pop.) (*see Tour 1D*), the junction with PR 9.

At 49.1 *m.* (L) are the protected excavated foundations of the town of Caparra (*see History*), founded by Juan Ponce de León in 1508, the first European settlement in Puerto Rico. In 1519, because of the malarial marshy surroundings, the colony moved to the present site of the

city of San Juan. During the excavations many archeological remains have been found.

At 49.6 *m.* is the junction with PR 25 (*see Tours 1A, 1D*).

East of this junction PR 2 is bamboo-shaded, and the route goes over a bridge-like road built over a wide expanse of mangrove swamps. From this point the variety in the topography of the Island may be appreciated. On the north is the wide bay of San Juan with the city rising high above it. To the east are the irregular peaks of the Luquillo Range, while on the south are the broad coastal lowlands dotted with foothills, and the main insular cordillera silhouetted in the background.

At 51.3 *m.* is the railroad crossing of the American Railroad, at which point the route enters Santurce, the residential section of San Juan, to Ponce de León Ave. on PR 1, 53.3 *m.* (*see Tour 1*).



Tour 2A

ORIENTE TOUR

Junction PR 3 with PR 23—Trujillo Alto—Gurabo—Juncos—San Lorenzo—Patillas; PR 23, 5, 7, 12, 63.4 *m.*

Local public cars. Others may be chartered. Limited accommodations.

The route follows a north-south direction through the east-central part of Puerto Rico, one of the most diversified agricultural areas in the Island. The variety in topography and vegetation assures a continuous change of

scenery. The northern lowlands, the fertile Caguas Valley, the eastern mountainous interior, and the southern coastal lowlands, afford each an example of the principal economic activities of the Island.

South from the junction with PR 3, 0 m., PR 23 traverses the northern foothills, a region which because of its rugged topography and loose top-soil is little cultivated, most of the area being covered by unimproved pasture.

At 1.4 m. is the junction with PR 67.

Right on PR 67 at 1.5 m. is the LEPROCOMIO (Leper Hospital) (*visitors welcome*). Besides the Administration Building there are 12 cottages, with accommodations for 80 patients. Formerly lepers were hospitalized on little Cabras Island at the entrance to San Juan Bay, facing Morro Castle. The Insular Department of Health classifies leprosy as a chronic, infectious, and contagious disease. Its etiological factor is the Hansen bacillus, whose period of incubation is slow. Some people believe that leprosy was found among the native Indians prior to the discovery, while others contend that it was brought by Negro slaves. Cases are reported with more frequency on the south side of the Island. Persons with symptoms of the disease are sent to the Insular Biological Department at San Juan for a diagnosis, and if positive, the patient is confined forcibly. The treatment given is the internal and external use of oil of chaulmoogra, which has been found satisfactory. The inmates lead an active social life, holding parties and milder athletic contests among themselves.

At 2 m. is a junction with a graded road.

Left on this road. At 0.6 m. is the SAN JUST RESETTLEMENT PROJECT of the Puerto Rico Reconstruction Administration. Formerly an abandoned 433-acre citrus fruit farm, it has been subdivided into 260 small farms, with an equal number of hurricane-proof cement houses. It is an interesting experiment in slum clearance through semi-urban development designed to provide facilities for residents with part-time employment in the metropolitan area of San Juan. The residents are able to better their diet by cultivating every-day products in their small farms, such as plantains, bananas, yams, cassava, and other tropical crops.

At 2.3 m. (R) is the HERMITAGE OF OUR LADY OF LOURDES (*visitors welcome*), a small shrine built by the

late Don Ángel Rivera on his estate. The gardens, featured by Stations of the Cross in carrara marble, are set off by a profusion of ferns and flowering plants. Mass is said on special occasions.

At 3.8 *m.* the route crosses a low wooden bridge over the Río Grande de Loíza, which is rather wide at this point, so that rowboats are frequently used. The original concrete bridge was washed away by torrential rains.

TRUJILLO ALTO, 4.3 *m.* (250 alt., 1,040 pop.), in the foothills of the Northern Cordillera, was founded in 1801 by settlers from the Canary Islands who were carefully selected by the Crown with the recommendation of Intendente Don Alejandro Ramirez, the first native treasurer in the history of the Island. Like all other Island towns, Trujillo Alto was placed under the protection of a saint or holy object—in this case *La Santa Cruz* (Holy Cross), the name which its church bears. Although some sugar and tobacco are grown within its municipality, there are a number of truck gardens and dairy farms to supply the Río Piedras and San Juan markets. Within its immediate vicinity are stone quarries supplying material for house and road construction. Trujillo Alto is the birthplace of Tulio Larrínaga, who served as Puerto Rican Resident Commissioner at Washington from 1904 to 1911.

Beyond Trujillo Alto PR 23 goes uphill, within the distance of 4.5 miles ascending to an altitude of about 2,000 feet, from where the greater part of the northeastern part of Puerto Rico is visible.

At 10.8 *m.* the route crosses to the south side of the range, and becomes one of the narrowest and most crooked in the Island, endlessly curving and twisting. The bare, precipitate hillsides are in marked contrast to the verdant Caguas Valley, far below, traversed by streams and dotted with towns and sugar centrales. In the background the im-

pressive Cordillera Central stretches clear across the Island from east to west.

At 15.6 *m.* is GURABO (250 alt., 3,242 pop.), incorporated as a town in 1815. Its name is of Indian origin. The militiamen of Gurabo aided San Juan in defeating the British in 1797.

Situated at the foot of a small hill called EL CERRO where the poorer class lives, the town draws its main subsistence from sugar cane cultivation and tobacco-stripping factories which afford work to women. The yellow SAN JOSÉ CHURCH looks down at the plaza fringed with Australian pines.

In Gurabo is the junction with PR 5, now the route. The road traverses an extensive region where sugar cane is cultivated. The flamboyant trees on both sides of the road form a canopy, affording a pleasantly cool drive. To the left, beyond cane plantations, rises the denuded and sparsely populated Northern Cordillera.

Deep in the valley, visible at 19.2 *m.*, is the JUNCOS CENTRAL of the Eastern Sugar Associates, one of the largest sugar mills in the Island, where most of the sugar of this region is manufactured.

JUNCOS, 19.8 *m.* (250 alt., 5,581 pop.), founded in 1797, is entered through a residential section called Madrid, as most of the homes there were built with money won from the first prize (*el gordo*) of the Madrid Lottery, which fell to ticket holders there during the early 1930's. The community had an era of great prosperity during the World War and early post-war years when sugar and tobacco commanded high prices. Several tobacco-stripping factories were established there, drawing away many people from Gurabo and other neighboring towns. Its paved streets, attractive homes, and plaza are reminders of this period. The facade of the INMACULADA CHURCH, built in 1812,

to the east of the plaza, is modelled after that of the Cathedral at San Juan.

Beyond Juncos on PR 5, the route passes over the lower hills of the eastern mountainous interior of the Island. For some distance it parallels the rock-bordered Valenciano River. This is a region of small farms where minor crops and tobacco are grown.

At 25 *m.* is the junction with PR 7, now the route.

SAN LORENZO, 32.6 *m.* (500 alt., 5,292 pop.). Founded in 1811 under the name of San Lorenzo (Sp. St. Lawrence) de Hato Grande, the town, situated on a small hill, is dominated by the square tower of its church. San Lorenzo is best known for the fine quality of the tobacco grown there. Much of the tobacco land has been turned over to sugar. The town is the birthplace of José Tous Soto, a lawyer and writer, who from 1925 to 1930 was speaker of the House of Representatives and at one time President of the Republican party.

South of San Lorenzo the route passes over PR 12, winding around the eastern interior hills with the narrow valleys separating them into small farms of tropical fruits and crops.

At 59.6 *m.* is **PATILLAS LAKE**, a reservoir that is part of the Puerto Rico Irrigation System of the South Coast.

The irrigation service was made possible by the Public Service Irrigation Act passed by the Insular Legislature in 1908, through the issuance of \$5,000,000 in bonds, which called for the construction of a system covering a 40-mile area of rich lands along the southside of the Island between Patillas on the east and Juana Díaz on the West (*see Tour 3*).

The practice of land irrigation in this part of the Island began with the first attempts to grow sugar cane. There were isolated systems, some supplied by diverting the flow of streams and others by pumping from surface waters and

deep wells. By the middle of the nineteenth century concessions for irrigation purposes began to be granted to landowners by the Spanish Crown. Actual construction of the system began in 1910 and was completed in 1914. The system is composed of four main storage reservoirs fed with the run-off from four different watersheds. A system of canals with a combined length of 100 miles distributes the stored waters to 33,000 acres of sugar cane, which under irrigation grows most luxuriantly.

The Patillas dam is an earth and stone fill 132 feet high, creating a reservoir with a capacity of 630,000,000 cubic feet, fed by the Matón and Patillas rivers, flowing from the east and west respectively.

The Patillas canal starts at the dam, follows the foothills and the ridge of the land which it irrigates and ends at a point near the town of Salinas (*see Tour 2B*). It is 25 miles long and carries an average daily flow of 70 cubic feet per second, the flow increasing to about 105 cubic feet per second at times of heavy demand. Lateral canals located at convenient places distribute the water from the main canals to the land.

At 63.4 m. is the town of PATILLAS (68 alt., 2,265 pop.) (*see Tour 2B*).



Tour 2B

EL YUNQUE HIGHWAY

Mameyes—Caribbean National Forest (Luquillo Unit)—La Mina—Río Blanco—Pueblito del Río—Mango—Juncos; 30.2 m. El Yunque Federal Road, PR 28, 5.

Asphalt-paved. Public cars follow most of the route, but it is advisable to charter a car. Pause several times during the ascent to cool engine. Tourist cabins at La Mina.

This short cross-Island route is popular, offering a good highway free from heavy traffic, and traversing the dense tropical growth and coolness of the Caribbean National Forest. The Federal highway penetrates the Luquillo Range, a virgin tropical forest. On the south side of the divide, the route descends to carpet-like sugar fields that cover the eastern coastal lowlands, interspersed here and there with irregular chains of hills. The island of Vieques, and the islets several miles away to the east, are clearly visible from the southern portion of the route.

At MAMEYES, 0 m., a barrio of the municipality of Luquillo (*see Tour 2A*) the road, which has been following the rocky bed of the winding Mameyes River, starts its gradual ascent into the forest. *Mameyes* (Sp. *mammee-apples*) are tall oval-shaped trees with waxy olive-green leaves, ranging in height from 30 to 60 feet and common to the West Indies. The fruit makes excellent preserves, the sap produces a medicinal gum, and the wood is much used for house construction by country people throughout the Island.

The ocean unfolds with a constantly wider expanse, white coral beaches grow smaller in the sun, and the breakers begin to melt into the calm blue of the distance. Streams of pure mountain water tumble over the mountainsides, dropping sometimes a thousand feet in a mile.

A stone gate, 4.7 m., marks the entrance to the CARIBBEAN NATIONAL FOREST (LUQUILLO UNIT).

The Caribbean National Forest came into existence through a Presidential proclamation dated June 4, 1935, when it was decided to purchase lands in the Cordillera Central, the main mountain range of the Island, as a new unit of the National Forest which already existed in the

Luquillo. The nucleus of the new forest, however, was the old Luquillo, established in 1903 by a proclamation of President Theodore Roosevelt. This forest was created from lands formerly belonging to the Spanish Crown and ceded to the United States by the Treaty of Paris. No additions of any importance were made until 1934, when the National Forest Reservation Commission approved the establishment of the Toro Negro Unit in the Cordillera Central (*see Tour 3*). In 1935 the name of the forest was officially changed from Luquillo to Caribbean. Up to that time, little of the 35,000 acres of land suitable for inclusion in this unit had been actually purchased. Acquisition will be continued, however, as land is offered for sale at reasonable prices, and purchases are being made in both the Luquillo and Toro Negro Units with the ultimate objective of obtaining approximately 65,000 acres for the forest.

The Caribbean National Forest enjoys a unique place in the national forest system of the United States because the tropical tree species, which grow here with amazing rapidity, are not only rare and interesting, but exceedingly useful. More than 300 species have been identified, and new ones are being added to the list constantly. Many of the species are found only in Puerto Rico, and a number of these grow only in the National Forest itself.

In the Luquillo Unit great trees spread immense crowns hung with vines and lianas, and every trunk, crotch, or limb supports its fringe of jungle epiphytes, the red nonparasitical "flame-plants" that look like pineapple growths encircling the trunks of trees. Tree leaves hold water and form natural aquariums for semiaquatic insects, tree toads, and other creatures. Beneath these forest giants is a tangled understory of smaller trees and shrubs, which, in turn, shade a bewildering mass of flowers, herbs, and mosses, and more than half a hundred varieties of graceful ferns. Shell-

pink begonias turn the forest floor into fairyland. Some of the ferns are extremely small and others achieve a height of 30 feet. The fern banks cannot be adequately described. Tiny, delicate orchids growing on trees, rocks, and logs, produce large sprays of yellow flowers that resemble a swarm of butterflies. Occasionally pink ones are found growing on moss-covered trees.

The wildlife resources of the Caribbean Forest are varied. Thrushes, finches, cuckoos, and parrots inhabit the Luquillo Unit and make it beautiful with their song and color; humming birds, sometimes in noisy squadrons, fill the air with their characteristic buzzing as they dart about the forest.

An experiment has been undertaken by the Forest Service, in co-operation with the Federal Bureau of Fisheries and Insular authorities, in the introduction of rainbow trout in several of the swift mountain streams. Although it is still too early to announce the results, or to allow fishermen to get out their rods and flies, indications are that within a few years the National and Insular forests will afford good trout fishing.

The forest may be classified roughly into two types—rain and dwarf. Tree trunks throughout the rain forest are festooned with myriads of air plants, whose fiery scarlet spikes of blossom light up the cool green dimness. Especially beautiful among the vines are the *bejuco de San Juan*, noted for its red flowers, the *bejuco de palma*, characterized by clusters of orange flowers, and the *aguacera*, a small shrub which scents the air with fragrant white blossoms.

The dense dwarf-type forest is found on the highest slopes of the mountains. Because of thin soil, excessive moisture, and exposure to strong winds, the trees, many of them a century old and not found anywhere else in the world, are often no taller than a man. Their trunks, and

sometimes even their twigs, are hung with pendants of gray moss.

Three-fourths of all the virgin timber remaining in Puerto Rican forests, which once covered the entire Island, is included in the Caribbean National Forest. The primeval forests of Puerto Rico were stocked with timber, unequalled in quality throughout the West Indies. Today only a relatively few acres offer merchantable material. There is some new growth of timber trees, but for the most part the cut-over land has been taken over by worthless species and brush. With a decreasing timber supply, the demands for wood have increased until practically all the building lumber used in Puerto Rico today is imported.

Puerto Ricans require a tremendous amount of wood to make charcoal, the leading fuel for cooking. Neither coal nor oil is found on the Island, and electricity is available only in the larger towns and cities. Therefore, the greater part of the population must depend on charcoal, and the depletion of the forests is forcing the importation of wood for charcoal in increasing quantities.

Puerto Rico's forests once supplied many valuable cabinet woods, and at one time a furniture and cabinet-making industry flourished, but with the passing of the forests the industry declined. Under normal economic conditions the importation of timber products amounts to \$5,500,000 per year. Much of this could be supplied from Puerto Rico's forests if they were rehabilitated and properly managed. Not only would this reduce the timber bill for the Island, but it would also provide needed work for many of its people. It is entirely possible that through intensive management, Puerto Rico's forests can produce an exportable surplus of such valuable wood as mahogany, Spanish cedar, satinwood, and laurel sabino. The wood-using industries could be revived and the Island become largely self-supporting, with regard to wood requirements, if the idle lands

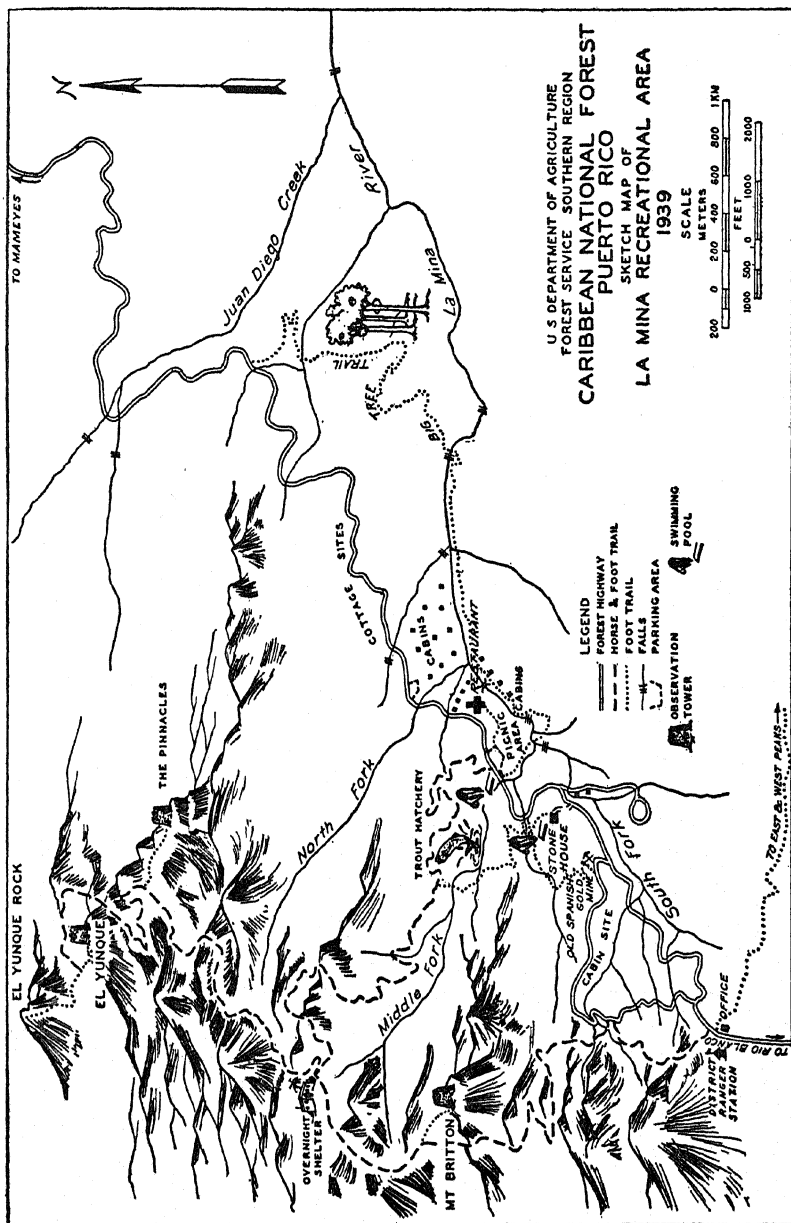
sued only to forest production were properly managed. Even the limited practice of forestry on the Island will result in tremendous and lasting benefits, both economically and socially, and all expansion of such activity will increase these benefits.

Development of the Caribbean National Forest is being conducted according to the Forest Service policy of multiple use. The principal objective is to restore the forest land now in Federal ownership to a productive condition and to provide leadership in efficient forest management methods for owners of lands better suited to growing timber than other agricultural products. This policy will result in making Puerto Rico more nearly self-sustaining with regard to its timber needs and will improve the economic condition of the Island populace by stimulating industry. Forestry practices are being tried, planting methods developed, and the adaptation of more useful species studied. As soon as practicable the Forest Service desires to establish a tropical forest experiment station on the Island to meet the need for basic information concerning tree growth, species, and the influence of climatic factors. In addition to preserving and restoring timber resources, protection will be given all wildlife, and areas better suited to recreational use than to timber growing will be developed as playgrounds not only for the people of the Island, but as points of interest for visitors from the mainland.

Three forest-tree nurseries, with a combined production of over 2,000,000 seedlings annually, are maintained at Río Piedras, San Germán, and Utuado, respectively. Since 1926 the production and distribution of nursery stock for farm planting in Puerto Rico has been authorized under the Clarke-McNary law. Consequently, tree planting on all private lands has substantially increased.

At 5.2 *m.* (R) is a 125-foot waterfall.

The Big Tree Foot Trail 6.5 *m.* (L) is one of the many



foot trails leading into the denseness of the forest and mountain peaks.

At 7.6 *m.* is LA MINA (Sp. the mine), at the foot of El Yunque Peak, a larger type of recreational area developed by the Forest Service. There are ample picnic shelters. An open-air swimming pool in a natural rustic setting has been made by damming a mountain brook, and there have been added a diving tower and springboard, a bathhouse of stone and concrete, open-air fireplaces, and a community building with a tile floor that may be used for dancing. There are also a number of summer home-sites which may be leased at reasonable rates for the erection of cottages. Excellent drinking water and sanitary facilities conforming with public-health standards are provided.

Hikers and horseback riders will find 25 miles of trails that lead into the most ruggedly beautiful mountain country in Puerto Rico. Four high mountain peaks have been made accessible, and the wild beauty of a number of deep gorges has been discovered. One trail penetrates the heart of the unique mossy dwarf forest; others pass through stands of virgin trees and lead to waterfalls of great height and beauty. Along the trails are many of the stately, white-barked trees, called by the Indians *tabonuco*, which exude a substance used by the natives in making candles. There is also the *ausubo*, one of the most important commercial trees on the island, which provides heavy wood of maroon color. Beams and rafters in Spanish buildings constructed two centuries ago and still standing were carved from the *ausubo*. The laurel sabino, endemic to the Luquillo section and related botanically to the magnolias of Southern United States, is handsome with its magnificent branches and large conspicuous blossoms.

From La Mina several foot and horse trails lead into the forest. The one of chief interest to visitors is the foot trail of EL YUNQUE (Sp. anvil) PEAK, 2.7 *m.* (3,496 alt.).

Along the trails are little picnic cabins with open fire-places for outdoor cooking.

El Yunque is one of Puerto Rico's most interesting peaks. There, according to legend, the good and evil spirits *Yukiyu* and *Juracán* reigned from their mighty thrones and protected the Indians. From the observation tower on El Yunque are visible the American Virgin Islands, 40 miles away, and on a clear day the British Island of Tortola, 80 miles distant. At night the lights of 17 towns and cities of the Island may be counted. For the use of mountain climbers and hiking parties, overnight shelters are available free of charge near the summits of El Yunque and El Toro. Permission to use these may be obtained from the forest supervisor at Río Piedras. Visitors are urged to keep the area clean, but the Caribbean Forest is probably the only National forest in the system where it is unnecessary to post fire warnings. So great is the rainfall that the real difficulty is starting a fire, not extinguishing it.

South of La Mina, the highway is bordered by dense clusters of sierra palms and tree ferns broken here and there by trails leading into the forest and nearby cabins.

At 7.7 *m.* (L) a path leads to the SPANISH GOLD MINE, deep in the forest. Centuries ago the Spaniards penetrated this jungle in search of gold; huge earth pits tell the story of their disappointment. At this point (R) on the hillside is a stone cottage used by the Governor of Puerto Rico.

RÍO BLANCO (Sp. white river) RIDGE C. C. C. CAMP, 8.4 *m.* (L) is situated at the divide of the Luquillo Range, 2,530 feet above sea level, from which point the highway veers due southward.

The HICACO C. C. C. CAMP, 10.8 *m.* is one of three forest stations maintained by the Forest Service.

At 11.5 *m.* is the BUENA VISTA (Sp. good view) C. C. C. CAMP, from where the highway drops in sharp winding descent to the southeastern coastal lowlands, presenting

constantly changing vistas of mountain, valley, stream, and sea. The whole topography of the Island is exposed to view—the lowlands fringed by the lower hills, set off by the charming irregularity of the Cordillera Central, hazily gray in the distance.

At 13.4 *m.* is the exit of the Forest.

As the valley is reached at 17.6 *m.*, the road crosses a steel bridge over the sand-bordered Río Blanco River.

Left on a macadam road is the RÍO BLANCO HYDROELECTRIC POWER PLANT, 1 *m.*, built and operated by the Porto Rico Railway Light and Power Company, a Canadian corporation.

The route swings eastward to parallel the stream to the junction with PR 28 at RÍO BLANCO, 19.7 *m.*, a small barrio of the municipality of Naguabo. Here the Department of Education maintains a primary and secondary-unit school center, where children are taught agricultural and industrial occupations.

Right on PR 28 is NAGUABO (250 alt., 4,109 pop.), 3.6 *m.* Although chartered in 1794, the town dates back to 1511 when Don Diego Columbus, son of the discoverer and governor of Hispaniola, ordered a certain Captain Enríquez to establish a settlement upon the site under the name of Santiago del Daguo. Daguo was the aboriginal name of the river that waters the town, called today the Santiago (Sp. Saint James). The community was consistently attacked throughout the sixteenth century by Caribs from the neighboring islands of Vieques and Culebra (*see Tour 5*), especially in 1511 and 1515 when the settlement was burned to the ground. The entire region around Naguabo is devoted to sugar cane cultivation, the plantations reaching the very edge of the shoreline where once stood extensive coconut palm groves.

West of Río Blanco the route begins to rise, skirting a hilly section for a short distance, then suddenly coming upon the vast expanses of the eastern end of the Caguas Valley, from which most of the Island's rice supply came during Spanish times.

At 23.2 *m.* a new road leads to the junction with PR 5, 3.8 *m.*

Left on this road is LAS PIEDRAS (Sp. the stones), (500 alt., 2,032 pop.), 0.1 *m.* Although founded in 1801, the area had been settled as early as 1759 under the name of La Ribera de Las Piedras (Sp. the bank of the stones), and its jurisdiction was very extensive up to the end of the eighteenth century when the municipalities of Humacao, Gurabo, and Juncos were incorporated. The principal occupation of the people here is sugar-cane cultivation, although some tobacco, coffee, and minor crops are grown in small individual farms.

PUEBLITO DEL RÍO (Sp. little town of the river) 25.2 *m.*, a barrio of Las Piedras, once a prosperous village of large plantation owners, forlornly faces the highway.

At 26.8 *m.* is EL MANGO. Like Pueblito del Río this was a village of Spanish manorial days. El Mango during the Christmas season was a favorite place with the people of the neighboring towns, who would form a *trulla* (Sp. gay crowd) and go on horseback to the houses of friends, where they would sing *aguinaldos* at the front door until they were invited to dance, drink, and eat.

Beyond this point the route goes over the large sugar plantations of the Eastern Sugar Associates, with its main factory, the Juncos Central, down in the valley (*see Tour 2A*). The junction with PR 5 is at 27.8 *m.*

Immediately west of PR 5, now the route, the highway descends rapidly, crossing a concrete bridge over the Valenciano river at the edge of the town of JUNCOS (250 alt., 5,581 pop.), 30.2 *m.* (*see Tour 2A*), upon whose sandy banks washerwomen are frequently hard at work.



Tour 3

BORIQUEÑ TRAIL

Manatí — Ciales — Cialitos — Villalba — Juana Díaz;
42 m., PR 11.

Accommodations limited.

Macadam road throughout.

Public cars follow this route. Visitors bringing their own cars should hire drivers familiar with this steep mountain road. No gas stations or garages except in towns.

This, the shortest north-south route, traverses Puerto Rico through the very heart of the extremely rugged mountainous interior, at one point ascending to 3,000 feet, through one of the most impressive and striking areas of the Island.

South from MANATÍ 0 m. (*see Tour 2*) PR 11 follows, more or less, the banks of the Manatí River, over an Indian trail used for centuries.

The road twists around castle-like conical limestone foothills 25 to 150 feet in height that dot the northern region between Bayamón and Arecibo. These "haystack" hills, as they are popularly called, are covered with brush vegetation, and have innumerable weird caves. Exploring their almost unknown interiors may provide new thrills for adventure seekers. (*Take heavy shoes and gasoline lanterns or flashlights. Information at Manatí Police Station.*) Scattered small farms throughout the region cultivate coffee and citrus fruits. Large herds of cattle graze in the rich green pastures typical of the region.

The broad estuary of the Manatí River is planted to

sugar or is pasture land, the pale green of the cane and the deeper green of the grass set off by the dark green underbrush of the adjacent hills.

At 4.1 *m.* the road rises and falls in long, sweeping bends, with an imposing view of river and buttress-like hillsides rising high above the river banks, until a long steel bridge is crossed at 4.5 *m.* The road continues to climb, passing several pasture-covered hills.

At 5.4 *m.* is the junction with PR 20.

Left on PR 20 through pasture lands to MOROVIS, 7.3 *m.*, chartered in 1818. The hillsides surrounding this small community are honeycombed with caves where many fossil remains have been found. Little has been done in the way of paleontological exploration of the Island. There is reason to believe that it once formed part of the North and South American continents. Near the coasts are extensive deposits of compact limestone similar to some found in Florida, and large areas of aeolian limestone, elevated coral reefs, and lime-cemented sand similar to Bermuda limestone. The Caribbean Mountain Range of the northern coast of Venezuela and the eastern region of Mexico resemble the Puerto Rican Cordillera Central. Fossil remains of edentates, whose congeners inhabit South America, have been found in caves of the island. In the San Miguel Cave in Morovis two perfect skulls and two vertebrae of the *Acrotocnus odontrionus* and *Elasmodontomys obliquus* were found, said to be the only two complete skulls known to exist of the edentate which lived during the Pliocene Period. One of them is in the Museum of Natural History in New York City.

In CIALES, 8.1 *m.* (367 alt., 1,825 pop.), narrow streets lined with old houses show a decided Spanish influence. Incorporated in 1820, the town is at the pass to the interior Cordillera Central. To the south against a blue sky are silhouetted cloud-topped peaks, some more than 4,000 ft. in height. In 1867 a violent earthquake caused a landslide of part of a hill near the town causing many deaths and much property loss. During the Spanish-American War several riots took place here when hundreds of Puerto Ricans rebelled against the Spanish authorities.

South of Ciales the highway defiantly begins a precipitous

ascent through rugged, densely wooded country, climbing and dipping in long swooping curves and gradually attaining higher altitudes. Hibiscus hedges with their bright red blooms, giant elephant-ear plants, gay begonias, tree ferns, and mountain trees completely enclose the route in a cover of green vegetation, broken here and there by the barren *batey* (Sp. front yard) before the unpainted wooden house of a mountaineer.

At 13.1 *m.* (L) around a bend on a knoll is a well-kept rural school with the words PRRA VOCATIONAL SCHOOL set off in whitewashed rocks on its green lawn. From here PR 11 continues a winding course through wild-appearing forests, under which coffee plants grow, and exuberant roadside vegetation.

At 19.4 *m.* is CIALITOS (Sp. little Ciales), a small cluster of unpainted frame dwellings set close to the highway. Here charcoal and coffee are brought down from the mountains on ponies to be transported to urban centers by motor vehicles. This point marks the eastern end of the vast coffee region of Puerto Rico, which extends clear across to the most westerly foothills of the Island near the town of Rincón (*see Tour 2d*).

At 21.4 *m.* is the junction with PR 15 (*see Tour 4*) at the main Insular divide, approximately 3,000 feet high. From this vantage point, sometimes wreathed in clouds, the Island is a colored relief map, with the Caribbean a hazy blue expanse in the distance. In this sparsely settled mountainous area are many people with fair skins, some of them descendants of ship deserters in the days of impressment. The majority are small independent farmers raising coffee and garden produce. By the roadside children sell for a pittance flowers and fruits and bid a cheery *adiós* to the traveler.

At 26.1 *m.* the cascades of the Doña Juana River drop 100 feet, forming a natural swimming pool (L) among the

rocks at the roadside, then flow across the highway under a bridge into the Toro Negro River (R).

PR 11 follows in swinging loops over a hilly countryside the course of the extremely rocky bed of the river, to the entrance of the TORO NEGRO WATER POWER PROJECT of the Insular Government, 27.4 m.

R. on an improved road at 1 m. are the Toro Negro Hydroelectric Plants, Nos. 1 and 2.

Prompted and guided by the experience gained in the operation of the Carite Hydroelectric System (*see Tour 1D*), and moved by the desirability of developing to a greater measure the water resources of the country, in order to extend the use of cheap electric power as an incentive for industries, and to increase the well-being of the people in cities and in farms, the Insular Government decided in 1925 to work on a plan for enlarging its hydroelectric enterprise. An act was passed creating a working fund with the proceeds of a special tax and authorizing the surveys, construction, and operation of hydroelectric plants. This act was widened in its scope in the year 1927.

Pursuant to the provisions of that act the Toro Negro Water Power Project has been developed. This project comprises the Guineo Dam and Reservoir, the Matrullas Dam, Matrullas Reservoir, and Matrullas Canal, and the Toro Negro Hydroelectric Plant.

The TORO NEGRO HYDROELECTRIC PLANT No. 1 has an installed capacity of 6,000 horsepower formed by three waterwheels and direct-connected generators. It was completed in 1929 and has been in operation since, having been run at first with just the flow of the Toro Negro River and later, after completion of the Guineo and Matrullas Dams, with the waters of those two Reservoirs and the additional flow of the portion of the Toro Negro River below the dam. The increase in the electric power demand of the district has been such during the last few years that this plant is already operating to capacity.

Construction of TORO NEGRO HYDROELECTRIC PLANT No. 2 by the PRRA has greatly expanded the service. This project designed to produce 4,000,000 kwh, was started on October 10, 1935 and officially turned over to the Insular Government on March 22, 1937. In connection with this hydroelectric development an additional source of water supply has been added with the construction of the Matrullas Canal and the Matrullas Dam and Reservoir which are already in operation. These two reservoirs, which have a combined capacity of 6,200,000 cubic meters, afford an additional supply of water of about 25,000 acre-feet a year which, after passing through

the Toro Negro Hydroelectric Plant, go to increase the supply of water at the Guayabal Reservoir.

At 27.8 *m.* is a junction with a side road.

Left on this road to the DOÑA JUANA RECREATIONAL AREA, of the Toro Negro Unit, Caribbean National Forest, 2.2 *m.*, at the headwaters of Doña Juana River (*picnic grounds and a natural swimming pool*). From this point the river drops in three cascades before it finally joins the Toro Negro River. A forest trail mounts to an observation tower commanding a spectacular view of this wild mountain country. This area has an altitude of approximately 3,000 feet. Here the Forest Service has established a nursery to raise trees for planting on the Toro Negro Unit and also to establish test plantations of such valuable exotic species as *cinchona*, that have produced results which may lead to quinine production on a large scale.

At 3 *m.* is the MATRULLAS RESERVOIR that stores the headwaters of the Matrullas River, which drains a watershed lying immediately north of the main divide of the Island. The dam forming this reservoir is an earth-concrete, shaft-type spillway which disposes of the waste water above a maximum storage level of 2,415 feet above the sea. The water from the reservoir is conveyed through the Matrullas Canal which is 33,224 feet long, into the Toro Negro Tunnel where, together with the water coming from the Guineo Reservoir, it pursues its course down to the Toro Negro Hydroelectric Plant for electric power generation, discharging next into the Jacaguas River to be used for irrigation.

At 28.2 *m.* is a junction with an unimproved road.

Right on this road at 2.4 *m.* is the GUINEO RESERVOIR of the Insular Irrigation System, impounding the head waters of the Toro Negro River. The dam forming this reservoir is a rock-fill structure 125 feet above the bed of the river, with a reinforced concrete core wall which rises through the center portion of the dam and projects four feet above the crest of the rock-fill. A concrete shaft-type spillway disposes of the excess storage. Water drawn from this reservoir flows down the Toro Negro River to the inlet of the Toro Negro Tunnel, which was built in the year 1913 as part of the Irrigation System, and passes through this tunnel to the south side of the Island, then flows for a distance of 10,000 feet through the Aceituna Canal and drops through the steel penstock, falling 1,650 feet to generate electric power at the Toro Negro Hydroelectric Plant. The discharge from this plant empties into the

Jacaguas River, which flows to the Guayabal Reservoir, where waters are stored for irrigation of the lands included in the Irrigation System.

From here PR 11 continues its rapid descent by means of a series of dangerous curves, bordered by towering mountain peaks, giant tree-ferns, and wild banana trees that shield from view the cliffs rising on one side and dropping on the other.

Gradually the descent slackens and the road emerges on the rolling southern foothills to meander across the intermediate valleys of the Caribbean lowlands. There is a remarkable change in vegetation from an almost black green to a dun brown. The land is used mostly as pasture for the oxen of sugar corporations. Guinea grass covers the area, and although it becomes dry in winter, it reacts rapidly to the spring and summer rain, making luxuriantly green pasture. Dairying is carried on to supply the market of Ponce. Here and there are tobacco and cotton farms. These crops are planted during the fall rains and harvested in the dry winter season (*see Agriculture*).

At 34 *m.* (L) is the UNIVERSITY OF PUERTO RICO DEMONSTRATION FARM (*visitors welcome*), where experiments are carried on with native and imported plants. The station, through practical demonstrations, instructs farmers in the use of scientific methods of farming.

VILLALBA, 34.4 *m.* (407 alt., 3,527 pop.), lying along the Jacaguas River, is a cluster of small, nondescript houses. The town was a barrio of the municipality of Juana Díaz until the municipality was chartered in 1917. Its only industry is a small sugar mill.

Beyond Villalba the route enters the northern end of the soil-eroded southern coastal foothills, separated by narrow irrigated valleys covered with sugar cane. The highway is bordered by numerous villages of ramshackle houses with hard-packed clay front yards which attest the poverty and

unproductivity of the barren hills. These soil erosion conditions are in part the result of cultivation on slopes so steep and soil so easily worn out that destructive washing was inevitable (*see Agriculture*).

At 36.1 *m.* is a junction with a graded road.

Right on this road is EL SEMIL FARM, 1.8 *m.* Formerly a 1,100-acre coffee farm which was destroyed by the San Felipe Hurricane of 1928, it is now a resort called "The Dude Ranch of the Tropics," with limited accommodations. On the farm is a vanilla plantation.

A bridge nearly 1,700 ft. long, the longest on the Island, crosses the spillway of the GUAYABAL DAM, 38.6 *m.*, on the Jacaguas River. The reinforced concrete dam (R) holds in check an irrigation reservoir with a capacity of 9,500 acre-feet. Above the dam is the mouth of a 2,800-foot tunnel through the hills, that diverts into this valley the waters of the Toro Negro, Doña Juana, and Navaja Rivers.

Between the dam and Juana Díaz the road winds among low hills sparsely covered with cactus and *maguey* plants and *higüero* or calabash trees. The latter is a dark green tree similar in shape to the almond tree, ranging from 10 to 45 feet in height. The wood is not known to be used locally, but the rind of the fruit or gourd, like the shell of the coconut, finds a multiplicity of domestic uses among the *jíbaros* as cooking utensils, tableware, and musical instruments such as *maracas* and *güiros*. The *maraca* is a round gourd with designs carved while green. When dried the meat is taken out and the gourd is filled with beans or pebbles, making a sort of rattle. The *güiro*, or *güicharo*, as it is sometimes called, is a bottle-shaped gourd carved with incisions and played with a wire fork. These instruments, used for accompaniment for native orchestras (*see Music*) were adopted from the aborigines.

At JUANA DÍAZ, 42 *m.* (185 alt., 2,717 pop.), is the junction with PR 1 (*see Tour 1*).

Tour 4

SKYLINE PASSAGE

Junction of PR 11 with PR 15—Jayuya—Alto de la Bandera—Adjuntas—Castañer—Maricao—Mayagüez; PR 15, 6, 8, 16, 14, 27, 77.7 m.

Macadam roads throughout.

Local bus and automobile lines connect all points. Cars may be chartered.

Hotels only in Mayagüez; elsewhere limited accommodations.

This trip is primarily one of scenic interest, covering the mountainous "backbone" of Puerto Rico. The heights, averaging 2,000 ft., afford in panoramic display views of the Island, the two seas, and over all the tropical sky. The temperature is uniformly cool and the mountain air invigorating.

An occasional *jíbaro*, in drab trousers and bright shirt, trudges along, urging ahead his pack pony, laden with charcoal, paniers of tropical fruit or sacks of coffee. Cattle, hogs, and chickens wandering along the roadside indicate that somewhere back in the tropical wilderness is the meagerly furnished *bohío* of a mountaineer—a charcoal-burner or coffee-picker.

Towns are thrust almost out of sight down occasional narrow gorges.

At 0 m. is the MAIN INSULAR DIVIDE, and the junction of PR 11 with PR 15.

On PR 15, JAYUYA, 6.5 m. (1,600 alt., 6,361 pop.), is a small crowded town of narrow streets and undistinguished architecture, the home principally of laborers on

neighboring plantations. Above the town rises LOS PICACHOS PEAK, 4,398 ft., the highest on the Island.

West of Jayuya the highway parallels the Jayuya River, a tumbling, tortuous mountain stream, and then at 9.6 *m.* turns again into the hills. Ferns choke the entrance to narrow valleys distinguishable only by the murmuring of little streams. Vines and lianas clamber over tree tops, parasitically sucking their life. Ahead are impressive pinnacles silhouetted against a tropical sky.

EL ALTO DE LA BANDERA PASS, 20.7 *m.* (2,500 ft.), is a colony of summer residences perched on terraces overlooking the valley and the Caribbean. About the homes are rectangular beds of bright tropical flowers and plants. At the pass PR 15 is crossed by PR 6, the route used by General Miles in his march on San Juan during the Spanish-American War.

West from PR 15 at El Alto de la Bandera on PR 6.

ADJUNTAS, 24 *m.* (1,500 alt., 2,612 pop.), chartered in 1815, is in a narrow valley surrounded by hills and mountains. (*Drive slowly; steep grades; sharp curves*). The frame houses are set close to the street, with attractive gardens of subtropical flowers such as the Easter lily and giant daisy. The valley setting and the pureness of a high elevation give Adjuntas a bright cleanliness and make it easy to understand why many descendants of the *conquistadores* still live here. The community is an active coffee-trading center, and the surrounding coffee haciendas afford work to the inhabitants.

At 36 *m.* is CASTAÑER RESETTLEMENT PROJECT of the PRRA, a 1,645 acre farm, formerly devoted mainly to coffee growing. Two hundred small farms have been established here. These lands are unsurpassed for the cultivation of coffee and for that reason coffee is the principal product, but, as in the case of the La Plata tobacco project (*see Tour 1*), a large part of the farm is

dedicated to the raising of other products. These are tung oil and vanilla, perfume plants, tropical fruits, and vegetables. Puerto Rico is the only place under the American flag where vanilla is grown. It may soon become an important exporter of this product to the mainland. Like other PRRA resettlement projects, Castañer is provided with a central service farm, a community center and health facilities. The VANILLA CURING PLANT is one of the principal points of interest.

At 25.6 *m.* is the junction with PR 8, now the route.

North from the junction on PR 6, almost at the crest of the range, is UTUADO, 11.1 *m.* (1,000 alt., 5,582 pop.), a coffee-trading center. The plaza and radiating streets are lined with old *mampostería* (Sp. brick and mortar) buildings in the plain Spanish colonial style, and date from the town's founding by Lieutenant Don Miguel de Quiñones in 1739. The name is derived from the Indian one, *Otao*. The surrounding hills were the last stand of the aborigines in the Island, serving as hiding-places during their rebellion against the Spaniards in 1511. From these hills Chief Guarionex and his men would descend to attack the town of Sotomayor, located somewhere in the vicinity of Guánica and Guayanilla in the southern coast (*see History and Tour 2C*).

Numerous caves in the neighboring region offer a rich field for the study of ethnological and paleontological relics.

West on PR 8 the route passes through a 14-mile stretch of wild mountain scenery and coffee forests, where the thin, spiraling smoke of a charcoal-burner's fire rising above the trees is the only reminder of the scattered human inhabitants. The burning of charcoal, an almost universal fuel on the Island, supplements the mountain farmer's meager income.

At 40 *m.* is the junction with PR 16, now the route.

At 49 *m.* is the junction with PR 14.

West on PR 14 the highway traverses the region of the MARICAO INSULAR FOREST, a mountain area which had been largely denuded before it came into possession of the Insular Service. An extensive reforestation program

has been inaugurated, and experiments are being conducted in growing mahogany and other valuable trees. Although not native to the Island, mahogany grows about 20 feet a year in some localities. Development of the Maricao Forest has been made with the aid of the CCC and emergency funds provided through the PRRA. Adequate roads have been constructed, and recreational areas, including a swimming pool and picnic facilities, have been developed.

MARICAO, 61.7 *m.* (656 alt., 1,197 pop.), is a coffee-trading center with a small enclosed plaza surrounded by comfortable frame houses close to the street.

At Maricao is the junction with PR 27.

North on PR 14 to CONSUMO, 7 *m.*, a small village at the junction with PR 13. Although the houses are shabby, they are brightened with climbing roses, wisteria, and hibiscus. Right on PR 13 is LAS MARÍAS (500 alt., 2,016 pop.), 7.3 *m.*, incorporated as a town in 1871 by an act of the Provincial Deputation. In this narrow valley hemmed in by mountains the troops of General Swan had their last encounter with the Spanish troops in August 1898. The Spanish General Don Julio Soto, who had been shot through the leg, surrendered to General Swan and was taken in an American ambulance to Mayagüez.

West on PR 27. The route begins a long, gradual descent from the "backbone," through aisles of trees along the foothills to the sugar plantations of the western coastal plains.

At MAYAGÜEZ, 77.7 *m.* (16 alt., 50,371 pop.) (*see Mayagüez*) is the junction with PR 2.

Tour 4A

COFFEE HACIENDAS

Junction of PR 8 with PR 16—Lares—San Sebastián—Moca—Aguadilla; PR 8, 2, 36.8 m.

Macadam roads.

Limited accommodations.

This route, lying off the populous areas, includes some of the best natural scenery in Puerto Rico, and traverses the fertile upland coffee region of the Island.

Coffee, a native of Arabia, grows on a cultivated and semi-naturalized tree ranging from 10 to 20 feet in height, grown in plantations at all elevations, doing best in sheltered locations at or above 2,500 ft. The wood is often used for walking-sticks.

Large coffee *haciendas* (Sp. plantations) dating back to the introduction of the berry into the Island from Cuba in 1736 by Governor Don Felipe Ramírez Estenós, are set in deep narrow valleys between rugged mountains. Within a short period, the virgin woods of the Island were replaced by coffee forests, and the crop became the foundation of the economic structure of the people until 1898, when its culture was almost totally ruined by the San Ciriaco hurricane (*see Agriculture*). Coffee, curiously enough, had been brought to America in 1720 by Captain Des Clieux to replace the storm-devastated cacao plantations in the French West Indian island of Martinique in the Lesser Antilles, southeast of Puerto Rico.

At the junction of PR 8 with PR 16, 0 m., is a small crossroad settlement of unpainted imported pinewood

houses, 1,925 ft. above sea level. On a mound (R) stands the concrete Catholic chapel of Santa Isabel, half hidden by exuberant tropical vegetation. Here is afforded a clear view of MT. GUILARTE (alt. 3,950) to the northwest, its bold outline rising high above the lesser mountains and forested hillsides.

PR 8 runs in a due northwest direction through continuous upward and downward grades, exposing to view the sweeping outline of the Island's cool mountainous western region. Giant trees spread lofty boughs over the road, and multicolored plants bedeck the roadside.

At 2.1 m. is an extensive panorama of wild-forested areas and extremely rough ridges separating the hills, accentuated by the hazy blue of the Atlantic in the horizon. The route continues in bold sweeping curves, clothed in dense green vegetation, and resembling a mountain country lane.

At 5.8 m. (R) a massive sugar loaf formation stands out in the foreground, dominating the countryside.

PR 8 continues to twist and turn downward through jungle-like coffee forests, with the Culebrinas River (*see Tour 2c*) coursing far below through a green wooded gorge, which is crossed by a concrete bridge at 8.2 m., from where the route ascends again into a highland country of coffee haciendas.

Bananas and oranges are often seen growing on coffee plantations. These fruits often serve as the mainstay of a coffee farm until coffee is in full production. Charcoal from old trees and branches of the exuberant vegetation covering the area brings cash income to the coffee farms of the region. Here and there may be seen some sugar and tobacco patches in the enclosed valleys or level spaces.

At 10.5 m. is a roadside coffee village where the Department of Education maintains a handsome second-unit school, where mountain children dressed in school uniforms play in the yard. Most of the Puerto Rican children's games,

cradle songs, choruses, riddles or rhymes, chants, and exorcisms are a variation of corresponding Spanish juvenile folklore, although the Spanish origin of some of them is not traceable. Especially typical of Puerto Rico's juvenile folklore are the following games: *pico mandorico*; *Mariín pirulero*; *San Garabito*; *la gallina ciega* (Sp. blindman's bluff); *Doña Ana*; *la cucarachita Martina y el ratoncito Pérez*; *la cuica* (Sp. skipping rope); and the thrilling game of kites—"paper eagles that take their flight armed with a piece of glass tied to their tails, with which they may attack the smaller kite that struggles for its share of the breeze." There are a variety of tales about *Juan Bobo* (Sp. Simple John), and the famous *gallo pelón* (Sp. picked rooster) stories.

Coffee haciendas lie close to the road, the houses being usually two-story frame structures, the ground floor used for a coffee warehouse and the upstairs, with a balcony running the length of the building, for living quarters. The esplanade-like concrete bed in the front yard is used for drying coffee.

The coffee crop ripens unevenly. As a result the pickers must go over the same tree three or four times, at different intervals, to gather the crop. During the first two or three pickings care is taken to pick only the ripe berries, which are processed by themselves and give the best coffee. After this first picking, the rest of the berries are picked, green or ripe. These are also processed by themselves and give medium and inferior coffee.

The berries are passed through a machine with a rotating cylinder which breaks and separates the pulp from the beans inside. This pulp is usually discarded, although it has a high sugar content and an acceptable wine can be made from it. After the pulp is removed the coffee bean is still surrounded by a sort of mucilage which must be washed off. This mucilage is allowed to ferment from six to eight

hours and the beans are then washed. Usually two or three washings are necessary, and while the washing is done the coffee is stirred with a wooden rake. It is then taken out of the washing compartments and spread over a concrete platform to dry. Usually it takes two or three days of bright sun to dry the coffee. Steam driers are also used.

The bean is still subject to further processes before it can be marketed. Each bean is covered with a horny shell which must be taken off. This is done by machinery. After the shelling, another machine polishes the beans, giving to them the soft blue color characteristic of Puerto Rican coffee. After the coffee is polished, it is graded by hand, the small, imperfect, or broken grains being separated. Then the coffee is ready for marketing. Puerto Rican coffee is sold in bean form in the local markets, or ground and packed in cans for the United States.

Beyond this point are visible the fantastic limestone hills typical of the northern side of the Island. At intervals the road drops a thousand feet on both sides.

LARES (1,050 alt., 3,205 pop.) 13.8 *m.*, entered through steep hills, is one of the leading coffee centers in the Island; when coffee was king the community was rich and prosperous, as evidenced by its spacious but sadly neglected church and many weatherbeaten nineteenth-century mansions. During Spanish times the plaza was used for drying coffee.

Incorporated as a town in 1829, Lares has a special place in the history of Puerto Rico, for it was here that a serious armed attempt was made to obtain independence for the people by a group of patriots in 1868, the occurrence becoming known as *El Grito de Lares* (Sp. the Revolt—literally, Cry of Lares). In the town square, *La Plaza de la Revolución*, stands a simple obelisk erected in 1927 to commemorate the event, upon which are inscribed the names of the leaders of the movement, including that of Fran-

cisco Ramírez, who was named President of the Republican Government of Puerto Rico.

With its picturesque location in the midst of limestone hills and its cool climate, Lares is fast becoming a vacation resort. La Rambla Tourist Hotel is under construction.

Northwest of Lares PR 8 rolls over a more open and populated country which until recent years was dedicated exclusively to coffee and the domestic produce now being replaced by sugar.

At 20.4 *m.* a wrought-iron bridge spans a chasm into which the cascading Collazo River drops about 200 feet to a ravine covered with dense dark-green vegetation.

SAN SEBASTIÁN (500 alt., 3,836 pop.), 23.4 *m.* originally named Pepino (Sp. cucumber), was chartered in 1752. It was here that the revolutionary junta of the Grito de Lares planned the revolt of 1868. Like other communities of this region, San Sebastián draws its main subsistence from coffee culture. It has a well-preserved church, charming in its architectural simplicity, dominating the wide pink laurel-bordered plaza, and handsome buildings and houses.

Between San Sebastián and Moca, the route, bordered by many fruit-bearing trees such as breadfruit and avocados, rolls over the lower hills and narrow valleys of the western mountainous interior where coffee, food, and fruit crops are grown. The breadfruit, introduced from the East Indies, is a tree about 60 feet high, with huge, dark green, finger-like leaves. Its fruit, somewhat resembling a large grapefruit, is an important article of food, and its wood is highly appreciated for furniture and for housing construction. The large, pale green foliaged avocado, indigenous to Mexico, is widely planted throughout tropical and subtropical regions for its edible pear-shaped fruit, which also yields an abundance of oil for burning and for soap making.

From its seed is obtained a deep indelible black juice used for marking linen, and its wood is used for cabinet-making.

At 33.9 *m.* is the little town of MOCA (250 alt., 2,585 pop.). Its name, derived from Mocha, was chosen to characterize the fine quality of coffee cultivated here. The foundation of the town was approved by a royal decree dated 1779, although it was settled in 1772. During the American invasion in 1898, the municipality was abolished by General Henry, the military governor, because of differences with local authorities.

The small reconstructed church on a hill (R) overlooks the rather neglected town plaza. Following tradition, Moca celebrates its patroness day, Our Lady of Monserrate, a favorite in the western part of the Island, on September 8 (for the Shrine of Our Lady of Monserrate *see Tour 2d*).

Each town in Puerto Rico has its patron saint. Early colonizers of Hispanic America, when they founded a town, would place it under the protection of a saint or holy object. Every town celebrates the feast day of its saint with much ceremony. Games are played, dances, horse races, and cock-fights are held, fireworks are set off, and special religious ceremonies are held.

At 36.8 *m.* is the junction with PR 2. Right on PR 2 to AGUADILLA (13,465 pop.) (*see Tour 2*) 38.5 *m.*

Tour 5

VIEQUES AND CULEBRA ISLANDS

Ensenada Honda, P.R.—Punta Arenas, Vieques—Isabela II, Vieques—San Ildefonso, Culebra; 16 *nautical miles*. PR 70, 38.

Launches daily to Punta Arenas, Vieques. Fare \$1.60, time 1 hour. Punta Arenas to Isabela II, 50¢ by public car. Launches and sailboats from Isabela II, Vieques, to San Ildefonso, Culebra 3 times weekly. Fare \$1.50. Time 1 hour to 3 hours, depending on weather. Alternate route (Fajardo Playa) Isabela II, Vieques, 13 nautical miles. Launches daily. Fare \$1.60, time 2½ hours. A public car can be hired for tour of island.

This "Islands Route" affords unusual variety of land and sea. From the coral reefs of eastern Puerto Rico a wide expanse of blue-green waters stretches eastward to the adjacent islands of Vieques and Culebra, waters once roamed by the British, French, and Dutch in vain efforts to wrest these Caribbean islands from the crown of Spain.

At ENSENADA HONDA 0 *nt. m.* (*see Tour 2a*), the launch leaves the bay and enters Vieques Passage. At the entrance to the bay (L) is the CABRAS ISLAND LIGHTHOUSE, its white light visible 14½ miles.

The bays, inlets, reefs, islets, and banks of the vicinity abound in fish, with the hawkbill and green turtles inhabiting the shallow waters.

VIEQUES (pop. 10,037), 21 miles long by 3 miles wide, with an area of only 51 square miles, is almost an extension of Puerto Rico, the channel separating the two islands being at no point more than 60 feet deep. Narrow coastal low-

lands surround a chain of hills stretching east and west along the Island.

Originally named *Bieques* (Small Land) by the aborigines, whose chief also went by this name, the island was first explored in 1524 by Captain Cristóbal de Mendoza, governor of Puerto Rico from 1513 to 1515. During the Indian Rebellion in 1511 many Boriquén Indians found refuge here, and joined their once deadly enemies the Caribs in attacking Spanish settlements on the northeast side of Puerto Rico, principally San Juan and Loíza.

On several occasions it became necessary to organize expeditions from Puerto Rico to oust the British and French from Vieques. In 1647 the British, under the command of John Pinard, failed to hold Vieques, called by them Crab Island, and were followed by a fruitless French incursion a few years later. The British were again ousted from Vieques in 1718 and still again in 1753 by Puerto Rican volunteer troops. Spain ordered in 1816 the construction of a fort at Puerto Real. In 1839 Don Teofilo Le Guillen, a Frenchman, was named its first governor, and in 1854 the Conde de Mirasol, Governor of Puerto Rico, occupied and formally annexed it to Puerto Rico, as several European nations were contesting the right of possession by the Spanish crown. A free port until 1880, the Island was the point of call for many French and British merchant ships, many of whose sailors left descendants on the Island.

PUNTA ARENAS 9 *nt. m.* (Sp. Sand Point), a seaport village of sugar warehouses and nondescript houses at the easternmost end of Vieques, is the nearest point to the mainland of La Isla Grande (Sp. Big Island) as Puerto Rico is called by the Viequeños. Much of the incoming and outgoing traffic of the Island passes through this port.

The entire population of the Island is dependent directly or indirectly upon agriculture, there being no other industries except the growing, grinding, and processing of sugar

cane. The land is fertile, but dependable rainfall is lacking. Of the 28,000 cuerdas classed by the PRRA census of 1935 as total land in farms, approximately 75 per cent is used for pasture and 25 per cent for growing sugar cane. Sugar land has for the past twenty years amounted to approximately 99 per cent of total cuerdas planted to cash crops.

Most of the cane grown is in the west-central portion, where there were at one time four centrales in operation. Today there is only one, the Playa Grande, operated by the Benítez Sugar Co.

Nothing is exported from Vieques except sugar. Even to a greater degree than in Puerto Rico, foodstuffs such as flour, rice, beans, vegetables, and fruits are imported, as well as all manufactured articles. These imports come first to Puerto Rico and thence to Vieques, making the cost of living in Vieques even higher than in Puerto Rico.

East of the pier, PR 70 leads inland past large areas of coconut groves and mangrove bushes into an undulating coastal lowland given over to sugar cane. About this area are concentrated most of the 13,500 acres of land controlled by the Benítez Sugar Co.

At 4 m. is MOSQUITO, a fishing village close to the road by the shoreline, overlooking, across the channel (L), the irregular outline of the northeastern cordillera of Puerto Rico. The settlement sprung up around the environs of Central Arcada, the ruins of which stand at the east end of the village.

Here PR 70 runs into PR 38, now the route.

Right on PR 70 the road runs over the eastern end of a chain of hills known as the Tinajas, on the south side of Vieques.

At 0.2 m. is a CATHOLIC CHAPEL half hidden by sugar cane. As the divide is reached at 2 m. the sugar fields give way to small individual farms planted in small produce similar to the ones found in the mountainous regions of Puerto Rico. To the right of the divide is EL CERRO VENTANAS (Sp. Mountain Windows).

An opening at the top of the mountain leads to an enormous cave about which cluster many local traditions. The tale goes that Chief Bieque buried in this cave, just prior to his death at the hands of the white man, all the treasures and traditional ceremonial objects of his people; and that the constant roar emitted from it is his voice. No white man has dared to solve the mystery of its depths, although occasionally a venturesome lad with a rope tied around his waist has descended far enough to pluck the exotic *doradilla* (Sp. gilded) plant, which when picked dries up, but will live again when put in water. At this point the highway descends rapidly to the south side of the island, skirting denuded but heavily populated hillsides, dotted with small individual farms. PLAYA GRANDE (Sp. Large Beach), 2.2 m., site of Central Playa Grande of the Benítez Sugar Co., consists of a handful of frame houses at the foot of hills overlooking the Caribbean. The factory with a daily grinding capacity of 1,200 tons, constitutes the sole industrial activity in Vieques, and affords seasonal employment to a portion of the population. Here also is the PLAYA GRANDE STATION of the UNITED STATES WEATHER BUREAU, the records of which show that the average annual rainfall for the whole island is 49 inches. The rainfall varies from year to year and season to season, so that many of the crops and fruits grown in Puerto Rico cannot be grown here with any degree of certainty, sugar cane being the only crop able to stand such conditions. Beyond Playa Grande is PUERTO REAL, 3.3 m., the junction with PR 69. One of the first settlements of Vieques, it is today a desolate village of cane-field workers, impoverished since the *Central Esperanza* of the Eastern Sugar Associates was dismantled in 1930. Most of the corporation's 10,000 cuerdas are now used for pasture land. Its sugar cane production was reduced from 2,557 cuerdas in 1933 to 1,202 in 1938, and the cane is lightered across the passage to the Pasto Viejo Centrale, just beyond Humacao Playa in Puerto Rico (see *Tour 2A*).

The route follows PR 38, going over a number of hills almost entirely planted to sugar cane, emerging to parallel the sea along a continuous row of poorly built, unpainted houses in decided contrast to the natural beauty of the surroundings.

At 9.3 m. is the junction with a side road.

Right on this road to the BARRANCÓN RESETTLEMENT FARM PROJECT of the Puerto Rico Reconstruction Administration, 0.5 m., a 431-acre farm of hilly terrain which has been sub-

divided into 156 small farms, with the familiar PRRA hurricane- and termite-proof concrete houses surrounded by truck gardens. A network of trails and dirt roads connects the farms, school house, community center, service farm, and reservoir. The latter, situated at the top of the hill overlooking both sides of the land, was constructed to collect rainwater. It is an inclined dam covering $2\frac{1}{2}$ acres and holds three-quarters of a million gallons. At the service farm special attention is given to the growing of cotton for seed, as Vieques is free from diseases and insects injurious to cotton. Aid has been given individual farmers in "rogueing out" inferior cotton in order to improve the product's general quality. Users of sea island cotton, with its long staple, are keenly interested in the development of this program, as it holds promise of a new source of supply.

ISABEL II (50 alt., 2,876 pop.), 10.1 *m.*, on the north central part of the island, lying at the foot of the hills and spreading toward the sea, is the only town in the island of Vieques. Founded in 1843, it was named after Isabel II, ruler of Spain from 1833 to 1868. During her minority her handsome mother, Queen María Cristina, acted as regent (1833-43), throughout the period of the first civil war in Spanish history, started by Isabel's uncle Don Carlos, claimant of the throne. After Isabel's dethronement, which followed a turbulent reign, Prince Amadeo of the House of Savoy ascended the throne, then renounced it in 1873, to be followed by the first Spanish Republic, which lasted until December, 1874, when the monarchy was restored under Alfonso XII, son of Isabel.

Similar in appearance to Puerto Rican towns, Isabel II radiates from the Australian-pine-bordered Muñoz Rivera Plaza, in the center of which is a cistern, built in 1924 to supply water for the schools centered about the plaza. The town is rather drab, although most of the houses have large backyards shaded by fruit-bearing tropical trees, especially the Vieques mango, rival of the celebrated Mayagüez variety. Many of the inhabitants are descendants of the British and French, retaining foreign names and a few

foreign customs and traditions. In 1870, at the petition of Johannes Waldemar Zaccheus, the crown allowed the opening of a Protestant school for children of foreign residents. PUERTO MULAS (Sp. Port Mules) LIGHTHOUSE rises 68 feet above a headland facing Vieques Passage from the north. It is of white-painted stone, and was built in 1896. Spiral iron steps lead to the tower, where is installed a Barbier Armand reflector (Paris 1895), which throws a white light, visible from 10 to 16 miles, flashed 6 times a minute. The FORTIN (Sp. Little Fort) situated on a hill to the northeast overlooking the town and surrounding countryside, is an excellent example of Spanish military architecture. It is used as the municipal jail. Although built in 1847, at a time when several European nations contested Spain's right of possession of Vieques, the structure appears centuries older. In its main lines it resembles El Morro in San Juan, although on a much smaller scale. Flanking the outside terrace are two iron cannon. The interior is in ruins, save for the well-preserved native mahogany stairway leading to the upper floor. This floor contains three large rooms with high ceilings, once used as sleeping quarters for soldiers, now denuded of furniture. Rolled cloth hammocks, used at night by the prisoners, hang from the walls.

At the west end are small cells once used for prisoners under solitary confinement. At the east end of the building is a terrace with a deep cistern, no longer used. The life of the prisoners, though dull, is most informal, many of them going home at night. In the absence of the jailer, they proudly show infrequent visitors the sights of the prison. Most of them are jailed for minor crimes.

Right on Le Brun St. on an improved road, built with PRERA and FERA funds, banked by beach-grape trees, into an unimproved road over pasture land, now the route.

At 11.1 *m.* are the RUINS OF THE SANTA MARÍA SUGAR

MILL, around which sprang up the first settlement in the Island, abandoned in 1843 for the present site of Isabel II. To the right of the road is an old cemetery where former Governor Le Guillen is buried.

Beyond Santa María the route passes over a series of hills covered with pasture, affording constant views of Culebra and St. Thomas, Virgin Islands. This region, comprising the larger part of the pasture lands of the Island, is sparsely populated. Here are pastured the oxen of the sugar companies, as well as some excellent horses, cows, and goats.

At 17.1 *m.* (R) are the ruins of an old cotton-seed oil mill, now used as a corral for the cattle of the Eastern Sugar Associates.

At 19 *m.* is a salt-water lagoon inhabited by wild ducks (*hunting permitted*).

The road now parallels the cove-like shoreline, bordered by a profusion of tropical vegetation, beach grapes, coconut trees, mangrove bushes, *hicacos* to PLAYA BLANCA (Sp. White Beach), 20.9 *m.*

Retrace road to Isabel II.

Launches and sailboats leave Isabel II on Mondays, Wednesdays, and Fridays for the island of Culebra, 8 miles northeast across Vieques Sound. This sound abounds in sport fish, including tarpon, barracuda, Spanish mackerel (*crevalle*), and kingfish. Other fish found here are the jewfish, snooper, ten-pounder, angelfish, and amberfish.

CULEBRA (70 alt., 523 pop.), with its adjacent smaller islands and bays, was chartered in 1879, a year after the issuing of a royal decree prohibiting foreigners from destroying its forests, and appointing a commission to study the possibility of establishing a forest service for their conservation. Today, except for underbrush covering hills that range from 250 feet to 646 feet, the latter the altitude of

Mt. Resaca, the highest point on the Island, Culebra is completely denuded of trees. Only 11 square miles in total area, Culebra is similar in topography to Vieques—a series of rolling hills and narrow valleys of volcanic rock covered by pasture and brush. Like Vieques, Culebra suffers from a lack of rain, and the absence of streams makes agriculture almost negligible. Water has occasionally to be brought from Puerto Rico.

Most of the island's inhabitants live in the tiny village of SAN ILDEFONSO, at the foot of a hill on the southeastern side of the island, depending for their subsistence on small farm produce, fishing, and government service. Coco-nuts, the only commercial crop, occupy nearly one-half the cultivated area of the island.

In the shallow waters in the neighborhood are placed *nasa* or fish pots, a method of fishing much used in Puerto Rico and other West Indian islands. The pots, varying in size from three to six feet long and eighteen inches to three feet wide, are generally made of chicken wire. The mats and framework are tied together with calabash roots, palm-fiber cord, or wire. The white pulp of the cactus is placed in the pots to attract the fish, and the pots are fished at depths of from three to more than forty fathoms.

Culebra's excellent harbor makes it important as a naval base. The Puerto Rico Reconstruction Administration has built a landing pier and quarters for use of the United States fleet. Other defense measures are being undertaken.

Tour 6

MONA ISLAND

Mayagüez to Mona Island, 50 *nautical miles*.

San Juan to Mona Island by air, 140 *miles*.

Fare: Round trip boat-fare from Mayagüez, per person, \$15.

Round trip plane fare from San Juan, per person \$15 (minimum 2 persons).

Special two day week-end round trip by plane, \$25 per person (minimum 2 persons), from San Juan or Ponce.

This tour, offered under the auspices of the Puerto Rico Institute of Tourism, is made by boat from Mayagüez or by plane from San Juan or Ponce.

The trip by water, made in comfortable cabin boats, 70 feet long by 15½ feet wide, generally takes from 6 to 10 hours, depending on weather conditions. Boats are equipped with radio.

The trip by air is made in a modern airplane maintained by the Institute of Tourism, and takes about an hour and a half from San Juan.

At Mayagüez 0 *m.* the boat takes a westward course over the waters of Mona Passage which separates Puerto Rico from the Dominican Republic, a distance of approximately 90 miles. During the trip the operator is in constant touch with Station WWLZ at Mona.

Mona first appears as a hazy cloud on the horizon but soon its stately walls of solid rock rise abruptly more than 200 feet above the water.

From the air Mona appears perfectly flat and oval, its

sides descending straight into the sea, with a narrow line of beach on the south.

Passing MONITO (Sp. Little Monkey) ISLAND, 3 *nt. m.* northwest of Mona, the boat drops anchor at SARDINERO PLAYA, 50 *nt. m.*, a small cove. As the water is shallow here, a smaller boat is taken to the concrete pier, where there is a small U. S. Customhouse.

Air passengers land at a two-way T-shaped airport, 1,700 by 300 feet, the only one of its kind in the West Indies.

MONA (pop. varying) called Amona by the aborigines, approximately 6 miles long and $4\frac{1}{2}$ miles wide, with an area of 19.5 square miles, was discovered by Columbus during his second voyage to the New World in 1493. It became a port of call for Spanish galleons, and Ponce de León stopped here in 1508 for cassava bread on his way to colonize Puerto Rico. In 1511 the King ceded the Island to Bartolomé Colón, with full rights over the natives and cassava plantations. Later the grant was revoked and the Island annexed to Puerto Rico. A terrific West Indian hurricane in 1511 devastated the Island, destroying the cassava plantations, and killing many natives. The Carib Indians often attacked the peaceful Arawak inhabitants, capturing the men for food and the women for slaves. By 1584 there were few natives left. Mona soon became a haven of pirates and corsairs, French pirates taking possession of it in 1554.

It is believed that Almeida, the daring seventeenth-century pirate, maintained quarters here. He took great pleasure in plundering the wealthy Spanish towns on the mainland of South America. During one of his expeditions he saw pretty Adelaida, daughter of a rich and distinguished Spanish family. Falling madly in love with the girl, he kidnapped her. He encountered a British warship off Mona and in the battle that ensued the girl was killed. Her

death spurred Almeida and his men to sink the British ship. The story goes that Almeida chose Caja De Muertos Island, facing the city of Ponce, as her burial place. During the early part of the nineteenth century Mona became the hideout of Roberto Cofresí, the Puerto Rican pirate.

Prior to the establishment by the Insular Government in 1937 of the Mona Island Project, which includes the Forest Service, Civilian Conservation Corps, Camp Cofresí and the Tourist Camp adjoining it, Mona was inhabited only by a couple of families who came from Puerto Rico about 1910 and settled in caves on the east end of the Island, subsisting by hunting and fishing.

Today, Mona is principally a vacation resort, with attractive pinewood cabins and a large dining and dancing lodge with all modern conveniences, set under the shade of Australian pines and palms. In part of the area that was devoted to growing cassava in aboriginal days are now grown fruits and vegetables for the camp's table, such as watermelons, strawberries, string beans, beets, carrots, potatoes, and turnips. Experiments are being carried on in the planting of sea-island cotton and tobacco by the camp workers.

Some nine miles of trail, one day to be widened into a motor road, lead from the rolling shoreline on the southeast up through dense vegetation to a rock-strewn *mesa* or plateau on the north. This plateau drops away more than 200 feet on three sides in massive wall-like cliffs that thrust directly into the sea. The low-hanging trees of the *mesa* are covered with orchids, the cacti bear edible prickly pears, an occasional six-foot *iguana* scuttles off, and in the scrub bushes roam wild boars, goats, and bulls, the descendants of animals kept on the Island by pirates. At the top of the *mesa* is the lighthouse, 231 feet above North Cape, showing a white light visible 20 miles at sea. Below, at the water's edge, is the wreckage of a Spanish galleon, victim

of a tropical storm; its style and the cedar timbers of its hull, two feet in thickness, date its construction in the late sixteenth or early seventeenth century.

Mona is honeycombed with caves. Small openings on the side of the cliffs lead to underground passages of unknown depths full of stalactites and stalagmites. In them are pools of spring water, used to supplement Mona's annual average rainfall of a maximum 41 inches. The sound of dripping water reveals the presence of these underground springs.

Some of these caves were explored and named after 1874, when a royal decree granted permission to a Spanish company to exploit the guano. The known caves to the north of the Island bear such names as *Cabro* (Sp. goat), *Rifle*, *Toro* (Sp. bull), *Gato* (Sp. cat), *Capitán* (Sp. captain), *Esperanza* (Sp. hope), *Fé* (Sp. faith), *Espinal* (Sp. thorn bush); to the east, *Nuevo Lirio* (Sp. new lily), *Lirio* (Sp. lily); to the south, *Ataúd* (Sp. coffin), *Gallinas* (Sp. hens), and *Café* (Sp. coffee); to the west, *Cueva Negra* (Sp. black cave).

They were used as hideouts and living-quarters by pirates for nearly three centuries, as shown by the human and animal bones, fireplaces, cooking utensils, chains, and broken sabers that are occasionally found in them. Near one of these caves were found the remains of *El Portugués*, companion of Cofresí. His ghost, and the ghost of other pirates, are from time to time seen at Camp Cofresí.

Chief Agüeybana, leader of the Indian rebellion in 1511 in Puerto Rico, is said to have come to fish at Mona, one of his dependencies, and some historians say that he and Ponce de León met there.

Big-game fishing at Mona is becoming popular, especially as the fishing grounds are still unspoiled and uncommercialized, although all necessary equipment is available at Camp Cofresí. Hardly a hundred yards offshore are found

schools of tuna. Other game fish are barracuda, bonita, kingfish, mero, amber sharks, man-eating sharks weighing over 500 pounds, and mackerel. (For rates, apply to *Puerto Rico Institute of Tourism, San Juan or New York City*).



PART IV

Appendices



Chronology

- 1493 November 19. Columbus anchors in a bay on the northwest coast of the island of Boriquén and names it San Juan Bautista.
- 1506 Vicente Yáñez Pinzón is commissioned to conquer and colonize San Juan Bautista. Lands a few goats and hogs.
- 1508 August 12. Juan Ponce de León lands at the bay of Guánica. Explores the coast and founds Caparra on San Juan Bay.
August 16. Hurricane of San Roque.
- 1509 Ponce named Governor of San Juan Bautista.
First *repartimiento* or division of Indians among the Spaniards.
- 1510 Sotomayor, second Spanish settlement, founded by Cristóbal de Sotomayor.
- 1511 Revolt of Indians against the Spaniards. Settlement of Sotomayor destroyed by the Indians, who are subdued by Ponce.
- 1512 Juan Cerón named Governor.
Ponce discovers Florida.
- 1513 Introduction of Negro slaves into the Antilles authorized.
- 1515 Returning to San Juan Bautista from Spain, Ponce divides the island into two administrative districts.
Sugar cane introduced from Santo Domingo.
July 4. Hurricane of San Laureano.
- 1519 Capital city transferred from Caparra to present site of San Juan. Carib Indians begin series of incursions on Spanish settlements that continue until the early seventeenth century.
- 1521 Island and capital city exchange names, and the city of San Juan Bautista de Puerto Rico becomes the official seat of government. Ponce sets out for Florida, is wounded there, and dies in Cuba.
- 1526 October 4. Hurricane of San Francisco.
- 1528 French sack and burn San Germán.
- 1530 July 26. Hurricane of Santa Ana.
August 22. Hurricane of San Hipólito.
August 31. Hurricane of San Ramón.
- 1533 Construction of La Fortaleza begun.
September 12. Hurricane of San Leoncio.
- 1537 July 11. Hurricane of San Pío.
Mayors and high constables elected.

- 1540 Construction of El Morro begun.
- 1541 Pastures, woods, and waters made public domain.
- 1543 French destroy rebuilt settlement of San Germán.
- 1545 Offices of mayor and high constable again made appointive.
- 1560 Construction of city wall of San Juan begun.
- 1568 August 24. Hurricane of San Bartolomé.
- 1570 Gold mines exhausted, having produced about \$4,000,000.
- 1575 September 21. Hurricane of San Mateo.
- 1576 New Salamanca (on the present site of San Germán) burned by French corsairs.
- 1595 English under Sir Francis Drake and Sir John Hawkins unsuccessfully attack San Juan.
- 1598 English under Earl of Cumberland take San Juan. Abandon capital after five months on account of plague.
- 1600 Population about 2,500 whites, 1,500 Indians, 1,500 Negro slaves.
- 1615 September 12. Hurricane of San Leoncio.
- 1616 Arecibo and Coamo founded.
- 1625 Dutch under Bowdoin Hendrick unsuccessfully attack San Juan.
- 1626 September 15. Hurricane of Santa Catalina.
- 1631 San Cristóbal Fortress begun.
- 1702 English land at Arecibo; fail to hold the town.
- 1703 English land near Loiza; fail to hold territory.
- 1731 Oppressive commerce laws of Spain evaded by Governor Matías de Abadía, who officially encourages smuggling.
- 1743 English land at Boca Chica; forced to withdraw.
- 1752 Ponce founded.
- 1760 Mayagüez founded.
- 1765 Alejandro O'Reilly draws up Puerto Rico's first reconstruction plan and makes the first official census.
Population 44,883, of whom 5,037 are slaves.
- 1771 Fort San Gerónimo begun.
- 1775 Population 70,250.
- 1776 Inhabitants of Mayagüez assist the American revolutionists' vessels *Endawock* and *Henry*, pursued by a British man-of-war.
- 1797 British under Sir Ralph Abercrombie attempt to capture San Juan; repulsed after two weeks' siege.
- 1800 Population 155,426.
- 1811 Venezuela declares her independence, sending a wave of revolt throughout Spanish colonies in the New World.
- 1815 Royal Decree institutes some of the economic reforms proposed by O'Reilly.
Population 220,892.
- 1821 Santo Domingo declares her independence.
- 1823 Underground independence movement organized in Puerto Rico.
- 1832 Population 330,051.

- 1835 First of a series of uprisings of Puerto Rican independents.
- 1846 Population 447,914.
- 1860 Population 583,308. Percentage of illiteracy 91.2.
- 1866 Puerto Rican delegation journeys to Madrid to petition for reforms in the Antilles and for civil rights and abolition of Negro slavery in Puerto Rico.
- 1868 Revolt of Lares.
- 1869 Elections held to designate representatives to the Spanish Cortes.
- 1870 Conservative Party and Liberal Reform Party formed.
- 1872 Revolt of Yabucoa.
- 1873 Revolt of Camuy.
March 22. Abolition of Negro slavery.
- 1877 Population 731,648.
- 1883 Liberal Reform Party reorganized.
- 1885 Revolt of San Juan.
- 1887 First convention of Autonomist Party.
Terror instituted against Autonomists.
Population 798,565. Percentage of illiteracy 80.8.
- 1897 Majority of Autonomists join with Spanish Liberal Party and become Liberal Fusionist Party.
- 1898 February 9. Autonomous government, established by Royal Decree, inaugurated in Puerto Rico.
October 18. U. S. Troops occupy San Juan. Major General John R. Brooke becomes Military Governor.
December 10. Puerto Rico and its dependent islands ceded to United States by Spain.
Major General Guy V. Henry appointed Military Governor.
- 1899 General George W. Davis appointed Military Governor.
August 8. Hurricane of San Ciriaco.
Population 953,243. Percentage of illiteracy 79.6.
- 1900 April 12. Congress approves Foraker Act, giving Puerto Rico its first civil government under American rule.
May 1. Charles S. Allen becomes Puerto Rico's first civil Governor.
Use of Puerto Rican money abolished.
November 6. First election held under civil government.
Supreme Court organized.
William H. Hunt appointed Governor.
- 1902 Union Party and Republican Party formed.
- 1903 University of Puerto Rico founded.
- 1904 Beekman Winthrop appointed Governor.
- 1907 Regis H. Post appointed Governor.
- 1908 Workers Party formed, later becoming Socialist Party.
- 1909 George R. Colton appointed Governor.

390 PUERTO RICO

- 1910 September 6. Hurricane of San Zacharías.
Population 1,118,012. Percentage of illiteracy 66.5.
- 1913 Arthur Yager appointed Governor.
- 1914 August. German cruiser *Karlsruhe* refuels at San Juan.
- 1916 August 22. Hurricane of San Hipólito.
- 1917 March 2. Organic Act confers United States citizenship on Puerto Ricans and makes Insular Legislature completely elective.
June 2. Passenger steamer *Carolina* of the Porto Rico Line torpedoed off Atlantic City by a German submarine, causing loss of sixteen lives.
July 16. Puerto Ricans choose first elective legislature and approve prohibition.
July. Registration of Puerto Ricans of military age.
November. First Puerto Ricans called for military service.
- 1918 Severe earthquake.
- 1919 Sugar drops from 23 cents a pound to 3 cents.
Insular Legislature inaugurates a series of public works.
Needlework industry begins to expand.
- 1920 Women voters register for the first time.
Population 1,299,809. Percentage of illiteracy 55.
- 1921 Sugar industry collapses.
E. Mont. Reily appointed Governor.
- 1923 Horace M. Towner appointed Governor.
- 1926 Institute of Tropical Medicine opens.
July 23. Hurricane of San Liborio.
- 1928 September 13. Hurricane of San Felipe.
- 1929 March. Leaders of Republican and Socialist Parties propose program of Island reconstruction.
Brookings Institution makes extensive socio-economic survey of the island.
Col. Theodore Roosevelt appointed Governor.
Population 1,543,913. Percentage of illiteracy 41.
- 1932 September 26. Hurricane of San Cipriano.
Liberal Party formed. Socialists and Union Republicans in coalition win election.
James R. Beverley appointed Governor.
- 1933 Puerto Rico Emergency Relief Administration established.
Robert Hayes Gore appointed Governor.
- 1934 Puerto Rico Policy Commission presents its findings on the economic and social problems of Puerto Rico and its plan for their solution ("Chardón Plan").
Creation of Division of Territories and Island Possessions in the United States Department of the Interior. Supervision of Puerto

Rican affairs transferred to new Division from the War Department.

General Blanton Winship appointed Governor.

1935 Puerto Rico Reconstruction Administration established. Long-range program of reconstruction and rehabilitation inaugurated. Population 1,723,534. Percentage of illiteracy 35.1.

1936 Socialists and Union Republicans in coalition win election.

1938 Popular Democratic Party formed.

1939 Island leaders unite in petitioning for a clarification of Puerto Rico's political status.

Admiral William D. Leahy, retired Chief of Operations, U. S. Navy, appointed Governor.

Naval maneuvers in American Caribbean. Long-range programs of defense intensified and amplified.

1940 Population 1,869,245.

Books About Puerto Rico

Note: The change in spelling from Porto Rico to Puerto Rico was approved by Act of the United States Congress in 1932: the form Porto Rico survives, however, in corporate names, etc. The aboriginal name for the Island appears to have approximated the pronunciation Boriquén. This was later Hispanicized to Borinquen (accent on middle syllable). The modern tendency is to return to the form Boriquén, although the form Borinquen survives in place names, etc.

GENERAL INFORMATION, TRAVEL AND DESCRIPTION

Asenjo, Conrado. *Quién es Quién en Puerto Rico*. San Juan, 1936.
Aspinall, Algernon Edward. *Pocket Guide to the West Indies*. Revised ed. New York, 1925.

Capó, Claudio. *The Island of Puerto Rico*. 2nd ed. San Juan, 1925.
Census of Puerto Rico. Department of Commerce, Bureau of the Census. For 1899, 1910, 1920, 1930, 1935, 1940—.

Diffie, B. W. and J. W. *Porto Rico, a Broken Pledge*. New York, 1931.

Dinwiddie, William. *Puerto Rico, its Conditions and Possibilities*. New York, 1899.

Enamorado Cuesta, J. *Porto Rico Past and Present*. New York, 1929.

Fernández y García, Eugenio, & others. *El Libro de Puerto Rico: The Book of Porto Rico*. (In Spanish and English.) San Juan, 1923.

Flinter, George Dawson. *An Account of the Present State of the Island of Porto Rico*. London, 1834.

Fowles, George Milton. *Down in Porto Rico*. New York, 1906.

Hill, Robert Thomas. *Cuba and Porto Rico with the Other Islands of the West Indies*. New York, 1898.

Jennings, J. E. *Our American Tropics*. New York, 1938.

Mayoral, Barnés, M. *Anuario y Guía Completo de la Isla de Puerto Rico, 1492-1921*. San Juan, 1921.

Miranda, L. A. & González Ruíz. *Tourist's Guide to Puerto Rico*. San Juan, 1937.

Monteagudo, Antonio M. *Album de Oro de Puerto Rico: Golden Album of Puerto Rico*. (Album of photographs with descriptions in Spanish and English.) Havana, 1939.

Nones, Adolfo. *La Isla de Puerto Rico*. 3rd ed. San Juan, 1927.

- Ober, Frederick A. *Guide to the West Indies, Bermuda, and Panama*. Revised ed. New York, 1920.
- Puerto Rico Institute of Tourism. *Various leaflets and pamphlets published for free distribution*.
- Reck, Daisy. *Puerto Rico and the Virgin Islands*. New York, 1939.
- Stone, Grace Zaring. *The Heaven and Earth of Doña Elena*. (Fiction.) New York, 1939.
- U. S. Forest Service. *Caribbean National Forest of Puerto Rico*. Washington, D. C., 1936.
- Van Duesen, R. J., and E. K. *Porto Rico, a Caribbean Isle*. New York, 1931.
- Verrill, A. Hyatt. *Porto Rico Past and Present and Santo Domingo of Today*. New York, 1914.
- White, Trumbull. *Puerto Rico and Its People*. New York, 1938.
- Willoughby, W. F. *Territories and Dependencies of the United States*. New York, 1905.
- Wolf, M. S. & Mier, I. A. de. *Guide to Porto Rico*. New York, 1928.

GEOGRAPHY, GEOLOGY AND CLIMATE

- Asenjo, Conrado. *Geografía de la Isla de Puerto Rico*. 4th ed. San Juan, 1927.
- Meyerhoff, Howard A. *Geology of Puerto Rico*. (Monographs of the University of Puerto Rico, Series B, No. 1.) Río Piedras, 1933.
- Miller, Paul Gerard. *Dodge's Geography of Porto Rico*. New York, 1921.
- New York Academy of Sciences. *Scientific Survey of Porto Rico and the Virgin Islands*. 13 parts in 9 vols., New York, 1919.
- Picó Santiago, Rafael. *Studies in the Economic Geography of Puerto Rico*. (Monographs of the University of Puerto Rico, Series VII, No. 1.) Río Piedras, 1937.
- Ramírez de Arellano, Rafael W. "Los Huracanes de Puerto Rico." (*Boletín de la Universidad de Puerto Rico*, Series III, No. 2, December 1932, pages 68-69.)

PLANT AND ANIMAL LIFE

- Bello y Espinosa, Domingo. *Estudios sobre la Flora de Puerto Rico*. (Anales de la Sociedad Española de Historia Natural.) Madrid, 1881.
- Britton, N. L. and Wilson, Percy. *Descriptive Flora of Porto Rico and the Virgin Islands*. (Vols. 5-6 in *New York Academy of Sciences Scientific Survey*, above.)

- Cook, O. F. & Collins, G. N. *Economic Plants of Porto Rico*. (U. S. Natural Herbarium, vol. 8.) Washington, D. C., 1903.
- Danforth, Stuart T. *Los Pájaros de Puerto Rico*. New York, 1936.
- Stahl, Agustín. *Flora de Puerto Rico*. 3 vols. San Juan, 1936.
- Urban, I. *Flora Portorricensis*. 9 vols. Berlin, 1898-1928.

CONSERVATION, RECONSTRUCTION AND REHABILITATION

- Annual Report of the Commissioner of Health*. San Juan, 1906—.
- Annual Report of the Commissioner of the Interior*. San Juan, 1899—.
- Bulletin of the Department of Health*. San Juan, 1918—.
- Clark, Victor S. and associates. *Porto Rico and its Problems*. (The Brookings Institution.) Washington, D. C., 1930.
- Illness and Medical Care in Puerto Rico*. Washington, D. C., 1937.
- James, Earle K. *Puerto Rico at the Crossroads*. (Foreign Policy Association Report.) New York, 1937.
- Luchetti, Antonio. *Rural Electrification in Puerto Rico*. Washington, D. C., 1935.
- Puerto Rico Emergency Relief Administration. *Annual Report, 1933-34*. San Juan, 1935. *Brief Resumé of the Program of Activities*. 2 vols. San Juan, 1936.
- Puerto Rico Health Bulletin*. Quarterly. San Juan.
- Puerto Rico Policy Commission. *Report*. ("Chardón Plan.") San Juan, 1934.
- Puerto Rico Reconstruction Administration. *Annual Report*. San Juan, 1935—. *Rehabilitation in Puerto Rico*. San Juan, 1939.

PREHISTORY

- Coll y Toste, Dr. Cayetano. *Prehistoria de Puerto Rico*. San Juan, 1907.
- Fewkes, Jesse Walter. *Aborigines of Porto Rico and Neighboring Islands*. Washington, D. C., 1907.
- Lathrop, R. W. & S. K. *Porto Rico Collars and Elbow Stones*. London, 1927.

HISTORY AND GOVERNMENT

- Abbad y Lasierra, Fray Iñigo. *Historia Geográfica, Civil y Natural de la Isla de San Juan Bautista de Puerto Rico*. Madrid, 1789.
- Acosta y Calbo, José Julián, Ed. *Nueva Edición de la Historia de Iñigo Abbad*. (Anotada y continuada.) Puerto Rico, 1866.

- Acosta Quintero, Ángel. *José J. Acosta y su tiempo: estudio histórico*. Puerto Rico, 1899.
- Alfau y Baralt, Antonio. *Los partidos antillanos*. Puerto Rico, 1886.
- Almanaque Asenjo*. San Juan, 1937.
- Almanaque Burillo*. San Juan, 1912.
- Ángelis, Pedro de. *Misceláneas puertorriqueñas*. Puerto Rico, 1894.
- Annual Report of the Governor of Puerto Rico*. Washington, D. C. and/or San Juan, 1900—.
- Ashford, Baily K. *A Soldier in Science*. (Autobiography.) New York, 1934.
- Baldorioty de Castro, Román. *Las facultades omnímodas en 1811, y los diputados de Puerto Rico en 1869*. Madrid, 1869.
- Baldorioty de Castro, Román. *Una Campaña parlamentaria: colección de proposiciones presentadas y discursos pronunciados en las Cortes españolas de 1872-73 por la diputación de Puerto Rico*. Madrid, 1873.
- Barbosa de Rosario, Pilar. *Post Umbra, Juicios sobre José Celso Barbosa*. San Juan, 1937.
- Blanco, Tomás. *Prontuario Histórico de Puerto Rico*. San Juan, 1935.
- Brau, Salvador. *Lo que dice la Historia*. Madrid, 1893.
- Brau, Salvador. *Puerto Rico y su Historia*. Valencia, 1894.
- Brau, Salvador. *La Colonización de Puerto Rico*. San Juan, 1907.
- Brau, Salvador. *Historia de Puerto Rico*. Nueva York, 1904.
- Carroll, Henry K. *Report on the Island of Porto Rico*. Washington, D. C., 1899.
- Celis Aguilera, José de. *Mi Grano de Arena para la Historia Política de Puerto Rico*. Puerto Rico, 1886.
- Cervera Baviera, Julio. *La defensa militar de Puerto Rico*. Puerto Rico, 1898.
- Coll y Cuchi, José. *El Nacionalismo en Puerto Rico*. San Juan, 1923.
- Coll y Toste, Cayetano. *Boletín Histórico de Puerto Rico*. 13 vols. San Juan, 1914-1926.
- Coll y Toste, Cayetano. *Colón en Puerto Rico*. Puerto Rico, 1893.
- Coll y Toste, Cayetano. *Reseña del Estado Social, Económico e Industrial de la Isla de Puerto Rico al tomar posesión de ella los Estados Unidos*. Puerto Rico, 1899.
- Coll y Toste, Cayetano. *1797 Lealtad y Heroísmo de la Isla de Puerto Rico*. Puerto Rico, 1897.
- Coll y Toste, Cayetano. *Tradiciones y Leyendas Puertorriqueñas*. 2 vols. Barcelona, 1928.
- Cordoba, Pedro Tomás de. *Memorias Geográficas, Históricas, Económicas y Estadísticas de Puerto Rico*. 6 vols. Madrid, 1831-38.
- Dalmau Canet, Sebastián. *Ensayos Biográficos*. San Juan, 1929.
- Davis, Maj.-Gen. George W. *Report of the Military Government of Porto Rico*. Washington, D. C., 1900.

- Davis, Richard Harding. *The Cuban and Porto Rican Campaigns*. New York, 1898.
- Degetau y González, Federico. *The Political Status of Porto Rico*. Washington, D. C., 1902.
- Díaz Caneja, Ignacio. *La autonomía de las Antillas*. Puerto Rico, 1887.
- Díaz Caneja, Ignacio. *La Cuestión Ultramarina*. Puerto Rico, 1885.
- Figuerola, Sotero. *Ensayo Biográfico de los que más han contribuido al progreso de Puerto Rico*. Ponce, 1888.
- Géigel Polanco, Vicente. "Se Nuestras Luchas Políticas en el Siglo XIX." *El Mundo*, San Juan, June 6, 1937.
- Géigel Polanco, Vicente. *Legislación Social de Puerto Rico*. San Juan, 1936.
- Goenaga, Francisco de. *Notas para la Historia: Los Sepultureros de España en Puerto Rico*. Puerto Rico, 1899.
- González Ginorio, José. *El Descubrimiento de Puerto Rico*. San Juan, 1936. *Suplemento Bibliográfico*. San Juan, 1938.
- González Ginorio, José. *Luis Muñoz Rivera*. New York, 1919.
- Hermann, Karl S. *A Recent Campaign in Puerto Rico*. Boston, 1907.
- Hostos, Adolfo de. *Investigaciones Históricas*. San Juan, 1938.
- Labra, Rafael M. de. *La abolición de la esclavitud en las Antillas españolas*. Madrid, 1869.
- Labra, Rafael M. de. *Le abolición de la esclavitud en el orden economico*. Madrid, 1873.
- Labra, Rafael M. de. *La Cuestión de Puerto Rico*. Madrid, 1870.
- Labra, Rafael M. de. *Los diputados americanos en las cortes españolas*. Madrid, 1880.
- Labra, Rafael M. de. *Mi campaña en las cortes españolas de 1881 a 1883*. Madrid, 1884.
- López Baralt, José. *Some Aspects of the Territorial Policies of Congress with Special Reference to Puerto Rico*. (Monographs of the University of Puerto Rico, Series C, No. 2.) Río Piedras, 1938.
- Malaret, Augusto. *Medallas de Oro de Puerto Rico (biografías)*. San Juan, Biblioteca de autores puertorriqueños, 1938.
- Miller, Paul Gerard. *Historia de Puerto Rico*. Revised ed. Nueva York, 1939.
- Mixer, Knowlton. *Porto Rico: History and Conditions Social, Economic and Political*. New York, 1926.
- Montalvo Guenard, J. L. *Rectificaciones Historicas: el Descubrimiento de Boriquén*. Ponce, 1933.
- Muñoz Morales, Luis. *El Status Politico de Puerto Rico*. San Juan, 1921.
- Neumann Gandía, Eduardo. *Benefactores y Hombres Notables de Puerto Rico*. Ponce, 1899.

- Pedreira, Antonio S. *El Año Terrible del 87: Sus antecedentes y sus consecuencias*. San Juan, Biblioteca de autores puertorriqueños, 1937.
- Pedreira, Antonio S. *Hostos: Ciudadano de América*. Madrid, 1932.
- Pedreira, Antonio S. *Un Hombre del Pueblo, José Celso Barbosa*. San Juan, 1937.
- Pérez Moris, José. *Historia de la Insurrección de Lares*. Barcelona, 1872.
- Quiñones, Francisco Mariano. *Apuntes para la Historia de Puerto Rico*. Mayagüez, 1898.
- Quiñones, Francisco Mariano. *Historia de los partidos reformista y conservador de Puerto Rico*. Mayagüez, 1889.
- Roosevelt, Theodore. *Colonial Policies of the United States*. New York, 1937.
- Rowe, L. S. *The United States and Porto Rico*. New York, 1900.
- Sardá y Llavería, Agustín. *La isla de Puerto Rico, estudio histórico y geográfico*. Madrid, 1889.
- Tapia y Rivera, Alejandro. *Biblioteca Histórica de Puerto Rico que contiene varios documentos de los siglos XV, XVI, XVII, y XVIII*. Puerto Rico, 1854.
- Tapia y Rivera, Alejandro. *Mis Memorias*. New York, 1928.
- Tapia y Rivera, Alejandro. *Noticia Histórica de Ramón Power, primer diputado de Puerto Rico*. Puerto Rico, 1875.
- Timothée, Pedro C. *Efemérides de la Isla de Puerto Rico*. San Juan, 1886.
- Toro, Emilio del. *The Future of Porto Rico*. San Juan, 1914.
- Turnbull, David. *Travels in the West. Cuba, with Notices of Porto Rico and the Slave Trade*. London, 1840.
- Ubeda y Delgado, Manuel. *Isla de Puerto Rico: Estudio histórico, geográfico y estadístico*. Puerto Rico, 1878.
- Van Middeldyk, R. A. *The History of Puerto Rico*. New York, 1903.
- Vizcarrondo Coronado, Julio. *Elementos de historia y geografía de la isla de Puerto Rico*. Puerto Rico, 1863.
- Willoughby, W. F. *Insular and Municipal Finances in Porto Rico for the Fiscal Year 1902-1903*. Washington, D. C., 1905.
- Wright, Edward. *The Voyage to Saint John de Porto Rico by George Earle of Cumberland*. (In Purchase, Samuel. *Pilgrimes*. London, 1625.)

AGRICULTURE

- Annual Report of the Federal Experiment Station of Puerto Rico*. San Juan, 1935—.
- Annual Report of the Insular Experiment Station of Puerto Rico*. San Juan, 1917—.

- Bulletins and Circulars of the Federal Experiment Station of Puerto Rico.* San Juan, v. d.
- Informe Anual del Comisionado de Agricultura y Comercio.* San Juan.
- Journal of the Department of Agriculture of Puerto Rico.* San Juan, 1917—.
- McCord, J. E. and Huyke, R. *Small Farms in Two Areas of Puerto Rico: Part I, Carolina-Trujillo Alto; Part II, Isabela.* (University of Puerto Rico.) San Juan, 1936.
- Revista de Agricultura.* San Juan, 1918—.
- Year Book of the U. S. Department of Agriculture.* Washington, D. C., 1898—.

INDUSTRY, COMMERCE AND LABOR

- Annual Report of the Commissioner of Labor.* San Juan, 1908—.
- Aughinbaugh, William E. *Selling in Latin America.* Boston, 1915.
- Brau, Salvador. *Las clases jornaleras de Puerto Rico.* Puerto Rico, 1882.
- Department of Agriculture and Commerce. *Puerto Rico, Commercial and Industrial.* (Frequently revised.) San Juan, 1938.
- Fisheries of Puerto Rico.* Washington, D. C., 1932.
- Gayer, A. D. and others. *Sugar Economy of Puerto Rico.* New York, 1938.
- Lebrón Rodríguez, Ramón. *El Problema Obrero en Puerto Rico.* San Juan, 1924.
- Official Bulletin of the Chamber of Commerce of Puerto Rico.* San Juan.
- Puerto Rico Emergency Relief Administration. *Tariff Problems of Puerto Rico.* San Juan, 1936.
- Puerto Rico Labor News: Boletín de Trabajo.* (In Spanish and English.) Bulletin of the Insular Department of Labor. San Juan, 1937—.
- Puerto Rico. Legislature. Committee to investigate the causes of unemployment in Puerto Rico. *Reports (First, Second, and Third), 1930-32.* (In Spanish and English.)
- Puerto Rico. University. College of Law. *Children legislature in Puerto Rico,* prepared . . . under the direction of J. Villaronga Charriez. (1933.) (Mimeographed.)
- Report of Federation of Labor of Puerto Rico on Organized Labor of Puerto Rico.* *Cong. Record*, Dec. 17, 1937, vol. 82, no. 27, p. 2379-81.
- Smith, Dudley. *Growth of Business Activity in Puerto Rico and Underlying Causes.* (Association of Sugar Producers of Puerto Rico.) Washington, D. C., 1938.

- Smith, Dudley. *Some Standards for Measuring Puerto Rico's Economic and Social Progress*. (Association of Sugar Producers of Puerto Rico.) Washington, D. C., 1937.
- Tobacco Industry in Puerto Rico. (Agriculture Circular 519.) Washington, D. C., 1939.

TRANSPORTATION

- Informe del Comisionado del Interior al Hon. Gobernador de Puerto Rico*. San Juan, 1919.
- Little, L. L. *Puerto Rico, a Motorized Island*. New York, 1919.
- U. S. Army Corps of Engineers. *The Ports of Puerto Rico*. Washington, D. C., 1935.

THE PEOPLE

- Alonso, Manuel A. *El Gíbaro, Cuadro de Costumbres de la Isla de Puerto Rico*. 2nd ed. 2 vols. San Juan, 1882.
- Chenault, L. R. *The Puerto Rican Migrant in New York City*. New York, 1938.
- Child Welfare in Insular Possessions of the U. S.: Part 1, Puerto Rico*. (Children's Bureau Publication No. 127. U. S. Department of Labor.) Washington, D. C., 1923.
- Fernández Juncos, Manuel. *Antología Puertorriqueña*. New York, 1923.
- Fernández Juncos, Manuel. *Costumbres y Tradiciones Puertorriqueñas*. San Juan, 1883.
- González Font, José. *Escritos sobre Puerto Rico*. Barcelona, 1903.
- Mason, J. A. *Porto Rican Folklore*. (Riddles Journal of American Folklore.) New York, 1918.
- Pedreira, Antonio S. *La Actualidad del Jíbaro*. Río Piedras, Universidad de Puerto Rico, 1935. (Boletín de la Universidad de Puerto Rico, serie 6, num. 1, septiembre 1935.)
- Pedreira, Antonio S. *Insularismo: Ensayos de interpretación puertorriqueña*. Madrid, 1934.
- Prieto y Richards, Abelardo. *Cancionero Popular*. San Juan, 1892.
- Rosario, José C. *The Development of the Puerto Rican Jíbaro and His Present Attitude Towards Society*. (Monographs of the University of Puerto Rico, Series C, No. 1.) Río Piedras, 1935.
- Rosario, José C. *Problemas Sociales—El Negro: Haití—Estados Unidos—Puerto Rico*. San Juan, 1940. (Boletín de la Universidad de Puerto Rico, serie 10, num. 2, diciembre 1939.)
- Van Deusen, Elizabeth Kneipple. *Stories of Porto Rico*. New York, 1926.

Van Deusen, Elizabeth Kneipple. *Tales of Borinquen*. New York, 1928.

Van Deusen, Elizabeth Kneipple. *Tropical Tales*. New York, 1927.

EDUCATION

Annual Report of the Commissioner of Education of Puerto Rico. San Juan, 1900—.

Coll y Toste, Cayetano. *Historia de la Instrucción Pública en Puerto Rico hasta 1898*. San Juan, 1910.

Department of Education of Puerto Rico. *Bulletin*. San Juan, 1916—.

Ferrer Hernández, Gabriel. *La Instrucción Pública en Puerto Rico*. Puerto Rico, 1885.

Journal of the Department of Education. San Juan, 1938—.

Morales, José Pablo. *La Enseñanza Primaria Obligatoria*. San Juan, 1895.

Osuna, John Joseph. *Education in Porto Rico*. New York, 1926.

Padín, José. *Americanization by Accommodation*. San Juan, 1935.

Puente Acosta, Lorenzo. *Biografía del Maestro Rafael Cordero*. Puerto Rico, 1868.

Puerto Rico Department of Education. *General survey of the secondary school system of Puerto Rico* (1933). In 4 parts. (Mimeographed.)

Puerto Rico. Department of Education. *A survey of the public schools of San Juan*. 1931. (Mimeographed.)

Puerto Rico School Review. San Juan, 1917-37.

Survey of the Public Educational System of Porto Rico. (Columbia University.) New York, 1926.

Terán y Massoni, Manuel de. *Instituto de Segunda Enseñanza de Puerto Rico*. San Juan, 1896.

United States Office of Education. Advisory Committee on education. *Public education in the territories and outlying possessions*. Washington, D. C., 1939.

United States Office of Education. *Education in Puerto Rico, 1920-1930*. (Education Leaflet 4.) Washington, D. C., 1931.

United States Office of Education. *Public Education in Puerto Rico*. (Education Bulletin 5.) Washington, D. C., 1934.

Vizcarrondo, Francisco. *Education in Porto Rico*. San Juan, 1929.

RELIGION

Cuarto Centario de la Colonización Cristiana de Puerto Rico. (Various Authors.) San Juan, 1908.

Perea, Salvador y Juan Augusto. *Early Ecclesiastical History of Puerto Rico*. Caracas (Venezuela), 1929.

LITERATURE

- Aponte, José Agustín. *Vida Política y Literaria*. Mayagüez, 1908.
- Ayala, D. C. *Resumen Histórico-Crítico de la Literatura Hispano-Americana*. Caracas (Venezuela), 1927.
- Cadilla, María de Martínez. *La Poesía Popular de Puerto Rico*. Madrid, 1933.
- Carreras, Carlos N. *Antología Completa de Poetas Puertorriqueños*. San Juan, 1922. 3 vols.
- Coester, Alfred. *Spanish-American Literature*. New York, 1921.
- Gómez Tejera, Carmen. *Poesía Puertorriqueña: antología para niños*. La Habana (Cuba), 1938.
- Malaret, Augusto. *Vocabulario de Puerto Rico*. San Juan, 1937.
- Meléndez Pelayo, M. *Historia de la Poesía Hispano-Americana*. Madrid, 1911.

MUSIC

- Callejo, Fernando. *Música y Músicos Puertorriqueños*. San Juan, 1915.
- Chavier, Aristides. *Siluetas Musicales*. Ponce, 1926.
- Somohano, Arturo G. "Puerto Rico y su Musica." *El Mundo*, San Juan, October 24, 1937.

LOCAL HISTORY

- Bague, Dr. Jaime. "Bosquejo Histórico de Arecibo." *El Imparcial*, San Juan, August 7, 1937. "Bosquejo Histórico de Humacao." *El Imparcial*, San Juan, September 18, 1937. "Bosquejo Histórico de Utuado." *El Imparcial*, San Juan, September 25, 1937.
- Coll y Toste, Cayetano. *Crónicas de Arecibo*. Arecibo, 1891.
- Dessús, Luis Felipe. *Album de Guayama*. San Juan, 1918.
- Masini, Juan, y otros. *Historia Ilustrada de Yauco*. Yauco, 1925.
- Morell Campos, Ramón. *El Porvenir de Utuado*. Ponce, 1896.
- Nazario y Cancell, José María. *Guayanilla y la Historia de Puerto Rico*. Ponce, 1893.
- Neumann Gandía, Eduardo. *Verdadera y Auténtica Historia de la Ciudad de Ponce*. San Juan, 1913.
- Old San Juan*. San Juan, 1926.
- Stahl, Agustín. *Fundación de Bayamón*. San Juan, 1910.
- What to See in San Juan and How to See It*. San Juan, n. d.

BIBLIOGRAPHY

- Géigel y Zenón, José, y Morales Ferrer, Abelardo. *Bibliografía Puertorriqueña (1494-1894)*. Barcelona, 1934.
- Pedreira, Antonio S. *Bibliografía Puertorriqueña (1493-1930)*. (Monographs of the University of Puerto Rico, Series A, No. 1.) Río Piedras, 1932.
- Rivera, Guillermo. *A Tentative Bibliography of the Belles-Lettres of Puerto Rico*. Cambridge, Mass., 1931.
- Sama, Manuel María. *Bibliografía Puertorriqueña*. Mayagüez, 1887.
- U. S. Government Printing Office. *Insular Possessions. Price List 32*. (Government publications relating to the Philippines, Puerto Rico, Guam, American Samoa, Virgin Islands, for sale by the Superintendent of Documents.) Washington, D. C., 1939 (frequently revised).
- U. S. Government Printing Office. *Maps. Price List 53*. (List of Government charts and maps, including Puerto Rico, for sale by the Superintendent of Documents.) Washington, D. C., 1939 (frequently revised).

Index

Note: Consult p. xxii as to usage of Spanish proper names, in accordance with which such a name as Manuel de Elzaburu y Vizcarrondo is indexed thus: Elzaburu y Vizcarrondo, Manuel de.

- Abadfa, Matfas de, 48
- Abbad y Lasierra, Fray Iñigo, 135
- Abercrombie, Sir Ralph, 49
- Abolitionists, 244
- Aborigines, 101 ff.
- Academy of Belles Lettres, 136
- Accommodations, xxvi
- Acosta, José Julián, 69, 137
- Adjuntas, 362
- Agriculture, 73 ff.
- Agriculture, aboriginal, 106
- Agricultural Experiment Station, U. S., 75, 260
- Agriculture Experiment Station, Insular, 75, 274
- Agricultural workers, 76 ff.
- Aguada, 329
- Aguadilla, 330
- Aguas Buenas, 290
- Agüeybana, 39, 102, 382
- Aguirre Central, 319
- Aibonito, 282
- Aibonito Peak, 293
- Airplane Service, xxv
- Airport, Isla Grande, San Juan, 230
- Airways, 100
- Albizu Campos, Pedro, 67
- Alcohol, 86
- Allen, Charles S., 55
- Alonso, Manuel, 137
- Alto de la Bandera, 362
- American Railroad Company, 99
- Añasco, 328
- Andino, Julián, 150
- Animals, 28
- Arawaks, 101
- Archeology, 107
- Architecture, 114
- Area, 5, 27
- Arecibo, 333
- Arroyo, 318
- Arsenal, San Juan, 180
- Art, 155 ff.
- Asilo de Ancianos, 220
- Asilo de Párulos, San Juan, 186
- Asomante, El, 305
- Atheneum of Puerto Rico, 214
- Autonomist Party, 70
- Avocado, 19, 369
- Ayerra Santamaría, Padre Francisco, 134
- Ayuntamiento, San Juan, 197
- Balbuena, Bernardo de, 134
- Baldorioty de Castro, Román, 69, 70, 137, 197
- Ballaja Barracks, San Juan, 210
- Balseiro, José, 143, 335
- Bamboo, 261
- Banco Popular, San Juan, 198
- Band music, 151 ff.
- Barceloneta, 335
- Barracón Resettlement Project, Vieques, 374
- Batey, 103
- Bayamón, 298
- Barranquitas, 303
- Beneficencia Barracks, San Juan, 210
- Betances, Ramón Emeterio, 137, 327
- Birds, 25 ff.
- Blanche Kellogg Institute, 228
- Blanco, Tomás, 144
- Boca de Cangrejos, 232
- Bohiques, 103, 105
- Bohíos, 103, 118
- Boquerón, 327
- Borinquena, La, 151
- Boriquén Indians, 45, 101 ff.
- Botanists, 14
- Brau, Salvador, 138, 327
- Breadfruit, 20, 369
- Brookings Institute, 63
- Brownson Deep, 9
- Bullock's heart, 18

- Cabo Rojo, 327
 Cabras, Isla de, 210
 Cacao, 83
 Caciques, 102 ff.
 Caguas, 277
 Cashew, 16
 Caja de Muerto Island, 283
 Camino Real, 267 ff.
 Campeche, José, 155, 186, 326
 Camuy, 332
 Canóvanas, 307
 Cañuelo, El, San Juan, 210
 Caparra, 39, 41, 337
 Capitol, 118, 216
 Caribbean National Forest (Luquillo Unit), 344 ff.
 Caribbean National Forest (Toro Negro Unit), 358
 Caribs, 42, 101
 Carite Dam, 295
 Carolina, 306
 Casa Blanca, 115, 184
 Casa de España, 118, 215
 Casino de Puerto Rico, San Juan, 118, 213
 Cassava, 22
 Castañer Resettlement Project, 362
 Cataño, 298
 Cattle industry, 28, 77, 85
 Caves at Aguas Buenas, 290
 Caves at Manatí, 354
 Caves at Mona, 382
 Cayey, 280
 Ceiba, 311
 Ceiba de Ponce, 248
 Cerón, Juan, 40
 Cession to U. S., 53
 Chamber of Commerce of Puerto Rico, 199
 "Chardón Plan," 64
 Churches, 130 ff.
 Ciales, 355
 Cialitos, 356
 Cidra, 291
 Citizenship, 57, 59
 Civilian Conservation Corps, 351, 364, 381
 Clay, 35
 Climate, xxii, 6 ff.
 Clothing, xxiii
 Coal, 34
 Coamo, 283
 Coamo Springs, 283
 Cockfighting, 65, 165, 288
 Coconuts, 82
 Coffee, 55, 58, 80, 86, 365, 367 ff.
 Cofresí, Roberto, 327, 381
 Cofresí Camp, Mona Island, 381
 Coll y Toste, Cayetano, 138
 College of Agriculture and Mechanic Arts, 261
 Coloso Central, 330
 Columbus, Christopher, 36, 196, 255, 329, 331
 Columbus, Diego, 39, 43, 352
 Comerío, 302
 Commerce, 56, 89 ff.
 Communication, xxv, 100 ff.
 Composers, 147 ff.
 Concepción Hospital, San Juan, 193
 Conciliar Seminary, San Juan, 206
 Condado Hotel, 231
 Condado suburb, 231
 Conservation, 27 ff.
 Consumo, 364
 Cooperative marketing associations, 89
 Copper, 33
 Coquí, 319
 Cordero, Rafael, 121
 Cordillera Central, 10
 Corozál, 299
 Cotton, 83, 88
 Crabs, 25
 Creative Textiles Inc., 336
 Cuatro Calles, 317
 Cuesta de la Guitarra, 303
 Culebra Island, 8, 377 ff.
 Cultural life, 134 ff.
 Cumberland, George Clifford, Earl of, 45
 Currency, 55
 Customs duty, xxiii
 Customhouse, U. S., San Juan, 179
 Danza, 150
 Darío, Rubén, 139
 Decree of Race, 85
 Degetau y González, Federico, 241
 Departments, Insular, *see* Education, Justice, etc.
 Diego, José de, 71, 139
 Diet, 82, 109
 Diputación Building, San Juan, 202
 Discovery and exploration, 37 ff.
 Division of Territories and Island Possessions, U. S., 65
 Doña Juana Recreational Area, Toro Negro Unit (Caribbean National Forest), 358
 Dorado, 337
 Drake, Sir Francis, 44
 Drama, 145 ff.

Dude Ranch of the Tropics, 360
Dutch West Indies Company, 46

Earthquake, 61
Economic Society of Friends of the
Country, 121, 122, 150
Education, 120 ff., 222
Education, Department of (Insular),
125 ff., 163, 194
Ejemplo Central, 315
El Asomante, 282, 305
Eleanor Roosevelt Housing Develop-
ment, 269
El Mango, 353
El Semil Farm (Dude Ranch), 360
Elzaburu y Vizcarrondo, Manuel de,
196
Employment, 94
Ensenada, 323
Ensenada Honda, 312, 371
Escobar, Sixto, 223, 335
Escambrón Beach Club, San Juan,
226
Ethnic groups, 110 ff.
Events, annual, xxxv

Fajardo, 310
Fajardo Playa, 310
Falansterio, 230
Farms, 27
Fauna, 24 ff.
Federación Libre del Trabajo, 92
Federal Building, San Juan, 179
Fernández Juncos, Manuel, 121, 141
Fish, 26, 29
Fishing, xxxii, 166, 382
Flora, 11 ff.
Florida, 335
Foraker Act, 54
Forests, 12, 344, 363
Fortaleza, La, 43, 115, 189 ff.
Franciscan Chapel, San Juan, 197
French West Indies Company, 47
Fruits, 14 ff., 81
Fruit industry, 87

Gallardo, José M., v, 124
Game birds, 26
Gautier Benítez, José, 138
Gallera Borinquen, 288
Games of children, 366
Geography, 5
Geology, 5, 8 ff.
Ginger, 82
Goat Island, 210, 371
Gold, 33, 107, 337
González, Juan, 40

Government, 51, 52, 53, 54, 68 ff.
Governor, 68
Governor's Palace, 189
Granite, 35
Grotto of Lourdes, 294
Guadalupe, La, Cathedral of, Ponce,
240
Guajataca Lake, 332
Guamaní Central, 318
Guanábana, 18
Guánica, 323
Guánica Central, 323
Guayama, 295
Guaybana, 40
Guayanilla, 321
Guaynabo, 289
Guineo Reservoir, 358
Gurabo, 341
Guayabal Dam, 360
Gypsum, 35

Haro, Juan de, 46
Hatillo, 333
Hato Rey, 229, 269
Hawkins, Sir. John, 44, 244
Health, 216 ff.
Health, Department of, Insular, 228,
231
Hendrick, Bowdoin, 46 ff.
Henry Barracks, 280
Hermitage of Our Lady of Lourdes,
339
Highways, xxxiii, 98 ff., 267
Historians, 135
History, 36 ff., 387 ff.
Holidays, xxxv, 300
Holy Trinity Episcopal Church,
Ponce, 243
Hormigueros, 326
Horse racing, 165, 200, 269
Hostos, Adolfo María de, 254
Hostos, Eugenio María de, 136, 254
Hotels and apartments, xxvi
Housing, 118, 177, 230, 251
Humacao, 313
Humacao Playa, 312
Hunting, xxxii, 166
Hurricanes, 7, 42, 54, 63, 79

Ickes, Harold L., 65
Igualdad Central, 328
Illiteracy, 129, 219
Immigration requirements, xxiii
Independence movement, 49 ff.
Indians, *see* Boriquén Indians
Industrial Reform School for Boys,
263

406 INDEX

- Industry, 61, 84 ff.
- Institute of Tourism, Puerto Rico, xxi
- Intendencia Building, 117
- Iron, 34
- Irrigation, 314, 342
- Isabela, 331
- Isabel II, Vieques, 375
- Jájome, 293
- Jájome Highway, 292 ff.
- Jayuya, 361
- Jew plum or *jobo*, 16, 312
- Jíbaros, 112 ff., 276
- Journalism, 141, 160 ff.
- Juan Morell Campos Housing Development, Ponce, 251
- Juana Díaz, 284
- Juncos, 341
- Juncos Central, 341
- Justice, Department of, Insular, 194, 285
- Kaolin, 35
- Knights of Columbus, 227
- Labor, 90 ff.
- Labor, Department of, Insular, 92
- Labor movement, 91
- Lafayette Central, 77, 317
- Lajas, 324
- La Mina, Caribbean National Forest, 350
- La Muda, 276
- Land concentration, 57, 65, 76, 93, 314
- La Plata Valley, 281
- Lares, 368
- Las Casas, Father Bartolomé, 45, 90
- Las Cruces, 280
- Las Marías, 364
- Las Piedras, 353
- Lead, 34
- League of Patriots, 254
- Leahy, William D., 66
- Legislation, social, 62, 95
- Legislature, Insular, 56, 68
- Leprocomio (Leper Hospital), 339
- Liberal Party, 72
- Liberal Reform Party, 70
- Libraries, 122 ff.
- Library, Insular, 215
- Limestone, 35
- Literature, 134 ff.
- Living expenses, xxvii ff.
- Llorens Torres, Luis, 140
- Loiza Vieja, 307
- López de Haro, Damián, 174
- Los Caños Central, 79, 335
- Los Picachos, 10, 362
- Lottery, 65, 194 ff.
- Luquillo, 308
- Luquillo Range, 9
- Luquillo Unit (Caribbean National Forest), 344 ff.
- Magazines, xxvi
- Mala Pascua Cape, 316
- Mameyes, 308, 344
- Manatí, 335
- Manganese, 34
- Mango, 15
- Mango, El, 353
- Manihot, 22
- Marble, 34
- Maricao, 364
- Maricao Insular Forest, 363
- Market, San Juan, 186
- Matrullas Reservoir, 358
- Maunabo, 316
- Mayagüez, 252 ff.
- Mayagüez Playa, 257
- Mercedita, Central, 248, 315
- Miles, General Nelson A., 52
- Military Hospital, San Juan, 185
- Military Road, 267 ff.
- Miller, Paul G., 124, 142
- Minerals, 33 ff.
- Miramar suburb, 227
- Miranda, Luis, 151
- Moca, 370
- Mona Island, 8, 379 ff., 380
- Mona Passage, 328
- Monito Island, 380
- Monge, José María, 254
- Monjas, Las, Racing Park, 269
- Monjas, Plazuela de las, San Juan, 205
- Monserate Central, 336
- Monserate, Shrine of Our Lady of, 326
- Morell Campos, Juan, 151, 241
- Morell Campos Housing Development, Ponce, 251
- Morovis, 355
- Morro, El, 44, 47, 115, 176, 210
- Morro Castle, 211
- Morse, Samuel F. B., 100, 316
- Mosquito, Vieques, 373
- Mountains, 9 ff., 356, 361
- Mundo Building, El, 200
- Municipal Theater, San Juan, 145, 196

- Muñoz Rivera, Luis, 71, 139, 303
 Muñoz Rivera Park, San Juan, 221
 Museum of Natural History, San Juan, 221
 Music, 105, 147, 300, 360
 Naguabo, 352
 Naguabo Playa, 312
 Naranjito, 302
 National Guard of Puerto Rico, 218
 Nationalist Party, 67
 Native products, xxiii
 Negroes, 45, 91, 110, 112, 177, 243
 Newspapers, xxvi, 160 ff.
 Needlework industry, 61, 88
 Notre Dame Industrial School, 220
 Ojo del Agua, 331
 Oller, Francisco, 156
 O'Reilly, Alejandro, 48, 74
 Organic Act, 54, 57, 59
 Organizations, civic, xxviii
 Organizations, commercial, xxix
 Organizations, cultural, xxix
 Organizations, fraternal, religious and humanitarian, xxix
 Organizations, professional, xxix
 Organizations, social welfare, xxviii
 Organizations, sports and social, xxx
 Orocovis, 304
 Ovando, Nicolás de, 38, 120, 243
 Padín, José, 124
 Painting, 155 ff.
 Palace of the Bishop, San Juan, 186
 Paleontology, 355
 Palés Matos, Luis, 140
 Palmas Altas, 335
 Pan-American Airways, 100
 Papaya, 17
 Patillas, 316
 Patillas Dam, 343
 Patillas Lake, 342
 Pedreira, Antonio S., 143
 Penitentiary (Insular), 285
 Penitentiary (Old), San Juan, 184
 Peñuelas, 320
 People, 101 ff.
 Phosphate rocks, 35
 Plants, 13
 Plazuela Central, 335
 Playa Grande Central, 374
 Playa Grande, Vieques, 374
 Plena, 149
 Political parties, 69 ff.
 Polytechnic Institute of Puerto Rico, 325 ff.
 Polvorín, San Juan, 221
 Ponce, 233 ff.
 Ponce Cathedral (Cathedral of La Guadalupe), 240
 Ponce de León, Juan, 37, 38, 40, 41, 173, 206, 283, 337
 Ponce Playa, 246
 Popular Democratic Party, 72
 Population, 3, 65, 129
 Porta Coeli Church, San Germán, 116, 324
 Printing press, 136
 Pro Arte Musical, 153
 Proper names, xxii, 160
 Psychiatric Hospital, 287
 Public Works Administration, 32
 Pueblito del Carmen, 294
 Pueblito del Río, 353
 Puerto Real, 327
 Puerto Real, Vieques, 374
 Puerto Rico Alliance, 72
 Puerto Rico Cement Corporation, 297
 Puerto Rico Emergency Relief Administration, 63, 94
 Puerto Rico Institute of Tourism, xxi
 Puerto Rico Policy Commission, 64
 Puerto Rico Reconstruction Administration, 32, 65, 66, 94, 223, 281, 317
 Punta Arenas, Vieques, 372
 Quebradillas, 332
 Quiñones, Francisco Mariano, 69, 325
 Quintana Racing Park, 269
 Radio, 162 ff.
 Radio Station, U. S. Naval, San Juan, 221
 Radio Stations, xxvi
 Railroads, xxiv, 99
 Reconstruction Administration, *see* Puerto Rico Reconstruction Administration
 Recreation, xxx, 165 ff.
 Reforestation, 28
 Red Cross Building, San Juan, 213
 Religion, 130 ff.
 Repartimientos, 40
 Republican Party, 72
 Resources, 27 ff.
 Revolt of Lares, 50, 368
 Rice, 83
 Rincón, 328
 Río Blanco, 352
 Río Blanco Hydroelectric Plant, 352
 Río Grande, 308
 Río Llanos Central, 333
 Río Piedras, 270 ff.

408 INDEX

- Rivers, 29 ff.
- Roads, 98 ff.
- Roosevelt, Franklin D., 64
- Roosevelt, Mrs. Eleanor, 64, 269
- Roosevelt, Theodore, Jr., 92
- Root crops, 14 ff., 82
- Ruiz Belvis, Segundo, 69, 325
- Rum, 86
- Rural electrification, 32
- Sabana Grande, 322
- Salinas, 319
- Salt, 35, 327
- Sama, Manuel María, 254
- School of Tropical Medicine, 62, 117, 216 ff.
- Schools, 120 ff., 126
- St. Augustine Church, 220
- St. Luke's Protestant Episcopal Church, 221
- San Cristóbal, San Juan, 187 ff.
- San Felipe del Morro Castle, 211
- San Francisco Church, San Juan, 197
- San Germán, 324
- San Gerónimo Castle, 226
- San Ildefonso, Culebra, 378
- San José Central, 274
- San José Church, San Juan, 116, 206 ff.
- San Juan, 41, 44, 171 ff.
- San Juan Cathedral, 203 ff.
- San Juan de la Cruz, 210
- San Juan Gate, 184
- San Juan Municipal Market, 186
- San Just Resettlement Project, 339
- San Lorenzo, 342
- San Patricio Church, Lofza Vieja, 307
- San Sebastián, 369
- Santa Ana Church, San Juan, 199
- Santa Isabel, 319
- Santiago Island, 312
- Santo Cristo Chapel, San Juan, 116, 200 ff.
- Santo Domingo Convent (Old), San Juan, 209
- Santurce, 177
- Silver, 33
- Slavery, 91, 177, 243
- Slums, 177
- Socialist Party, 72
- Sociedad Económica de Amigos del País, 121, 122, 150
- Soil conservation, 76
- Sotomayor, Cristóbal de, 39
- Soursop, 18
- Spaniards, 110 ff.
- Spanish-American War, 52 ff., 212, 246, 283, 310, 322, 355
- Sports, xxx, 165 ff.
- Squash, 21
- Star-apple, 19
- Steamship lines, xxiv
- Submarine Gardens, 232
- Sugar, 46, 57, 79, 85, 274, 308
- Sweet potato, 22
- Swimming, 166
- Tallaboa, 320
- Taniers, 23
- Tapia Theater, San Juan, 146, 196
- Tapia y Rivera, Alejandro, 138
- Taro, 23
- Tavárez, Manuel G., 150, 236
- Taxes, 69
- Teachers' Association of Puerto Rico, 222
- Templo del Maestro, San Juan, 222
- Text books, 141
- Theater, 145 ff.
- Theaters, xxx
- Toa Alta, 299
- Toa Baja, 337
- Tortugeros, La Laguna de, 336
- Tobacco, 79, 86, 222, 300 ff.
- Topi-tambou, 23
- Toro Negro Hydroelectric Plant, 32, 357
- Toro Negro Unit (Caribbean National Forest), 358
- Traffic laws, xxiv
- Transportation, 97 ff.
- Treasure Island Camps, 292
- Trujillo Alto, 340
- Tuberculosis Sanatorium, 287
- Unemployment, 94
- Union Club, San Juan, 227
- Union Party, 72
- Union Republican Party, 72
- University of Puerto Rico, 117, 154, 158, 163, 217, 270 ff.
- University of Puerto Rico Demonstration Farm, 359
- University of Puerto Rico Hospital, 217
- Utua, 363
- Vanilla, 363
- Vega Alta, 337
- Vega Baja, 336
- Vegetables, 81
- Vegetation, 12 ff.
- Victoria Central, 306

Vieques Island, 8, 371 ff.

Vigía, El, Ponce, 249

Villalba, 359

Villalba Central, 359

Vocational training, 126

Wages, 95, 96

War Department, U. S., 209, 210

Water, 29 ff.

Water power, 31 ff., 295, 352, 357

Weather Bureau, U. S., 219

Women, minimum wages for, 95

Work Projects Administration, 66, 94

World War, 60, 93, 212, 216

Writers, 145

Y. M. C. A., San Juan, 214

Yabucoa, 315

Yacht Club, San Juan, 230

Yam, 21

Yáñez Pinzón, Vicente, 38, 46

Yauco, 321

Yunque, El, 9, 350

Zalduondo Resettlement Project, 309

UNIVERSAL
LIBRARY



140 125

UNIVERSAL
LIBRARY